Building Maths Fluency with Sumdog's Fluency Booster

## Targeted Support for Core Number Skills

Contents

Enhancing Learning Through Engaging Practice

Sumdog is an interactive maths and spelling platform designed for children aged 5 to 14 years old, combining high engagement with quality content and comprehensive curriculum alignment. With a vast collection of curriculum-aligned maths questions, Sumdog helps children build fluency through regular practice while enabling teachers to diagnose, assess, and identify areas for improvement.

How can Sumdog support learning

- **Personalised Practice:** Sumdog uses a diagnostic tool to assess each pupil's strengths and areas for improvement. It then provides tailored questions to help them develop their skills.

- **Engaging Games:** With over 35 fun and interactive games, pupils can practise maths concepts in an enjoyable way. This helps to keep them motivated and engaged.

- **Progress Tracking:** Teachers can monitor pupils' progress through detailed reports and low-stakes tests. This helps identify gaps in understanding and plan next steps.

- **Boosts Confidence:** As pupils become more fluent in maths, their confidence grows. They can apply strategies more effectively and solve problems with greater ease.
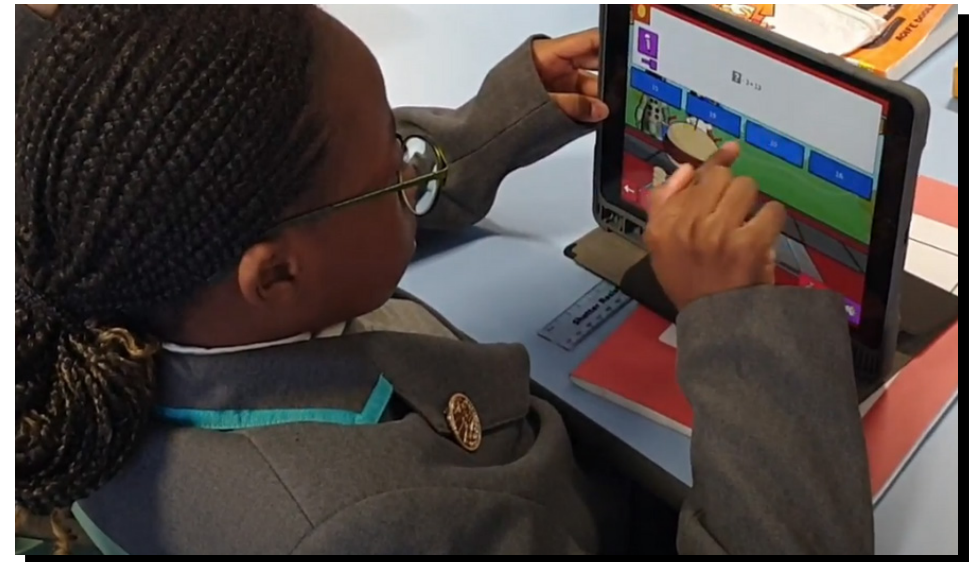
New Fluency Booster

This new feature is designed to enhance and consolidate pupils' mathematical fluency, covering core number skills for children aged 5–11. Sumdog's Fluency Booster adapts to each pupil's level without teacher input, automatically identifying areas for improvement and offering targeted support. As pupils progress at their own pace through their personalised learning journeys, they gain the confidence to improve, progress and tackle more complex topics.

By giving teachers a resource which focuses exclusively on core number skills, this new feature will help maintain pupils' foundational maths as in-class teaching moves on at speed, addressing gaps in understanding as they arise. By setting as little as half an hour of fluency practice on Sumdog per week, teachers will ensure that their students' core number skills are continuously topped up, and will also gain the key insights needed to plan targeted next steps.

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Place value	■	■	■	■	■	■
Whole numbers	■	■	■	■	■	■
Comparing and ordering	■	■	■	■	■	■
Rounding		■	■	■	■	■
Counting	■					
Whole number sequences	■	■	■	■	■	■
Sequences with fractions			■	■	■	■
Sequences with decimals					■	■
Addition	■	■	■	■	■	■
Subtraction	■	■	■	■	■	■
Multiplication		■	■	■	■	■
Number sense	■	■	■	■	■	■
Division		■	■	■	■	■
Number bonds	■	■				
Fractions	■	■	■	■	■	■
Decimals				■	■	■
Converting fractions, decimals, percentages				■	■	■

For children in Years 7, 8 and 9, Sumdog's Fluency Booster provides a valuable opportunity to consolidate the learning taught in primary school and identify any gaps in their knowledge. This feature ensures that foundational maths skills from years 1 to 6 are being reinforced as pupils progress to more complex mathematics. Teachers can be confident that their pupils aren't held back by any missed learning or areas that require extra practice, allowing them to focus on mastering advanced topics with a solid understanding of the basics.

In this document, you will see how the strands covered by the fluency feature progress across the year groups and the type of skills they will work on at each year group level.

Interested in trying out Sumdog's Fluency Booster for free with your school? **Sign up here**

Fluency Years 1–6

This chart illustrates the progression of Sumdog fluency strands from Year 1 to Year 6. Throughout each year, children will engage with a variety of skills within each strand, ensuring a comprehensive development of their mathematical abilities. Each strand represents a key area of maths that children will need in order to work towards mathematical fluency.

Legend:
- ■ Number & place value
- ■ Counting, sequences & patterns
- ■ Arithmetic
- ■ Number bonds & relationships

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Place value	■	■	■	■	■	■
Whole numbers	■	■	■	■	■	■
Comparing and ordering	■	■	■	■	■	■
Rounding		■	■	■	■	■
Counting	■					
Whole number sequences	■	■	■	■	■	■
Sequences with fractions			■	■	■	■
Sequences with decimals					■	■
Addition	■	■	■	■	■	■
Subtraction	■	■	■	■	■	■
Multiplication	■	■	■	■	■	■
Number sense	■	■	■	■	■	■
Division		■	■	■	■	■
Number bonds	■	■				
Fractions	■	■	■	■	■	■
Decimals				■	■	■
Converting fractions, decimals, percentages				■	■	■

✓ Addition
Children will practise addition within 5, 10, and 20, and solving missing number calculations up to 20.

✓ Subtraction
Children will practise subtraction within 5, 10, and 20, and solving missing number calculations up to 20.

✓ Counting
Children will practise subitising to 5 and 10, and 1:1 correspondence to 10 and 20.

✓ Multiplication
Children will practise sharing objects into equal groups.

✓ Place value
Children will practise understanding numbers up to 100, estimating positions on a number line from 0 to 20, and identifying odd and even numbers. They will also compare and order numbers up to 100, including ordinal numbers up to 20.
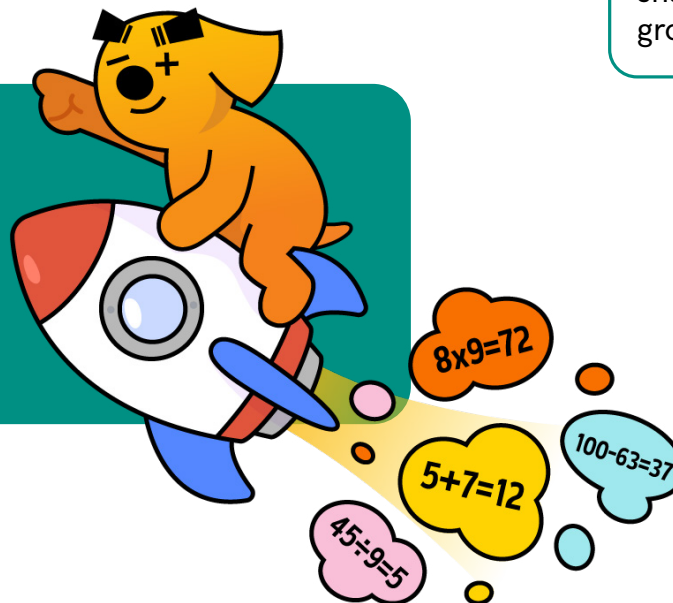
✓ Number bonds
Children will practise number bonds to 10 and 20, and doubles up to 20.

Year 1

$8 \times 9 = 72$

$100 - 63 = 37$

$5 + 7 = 12$

$45 \div 9 = 5$

✓ Number sense
Children will practise finding more or less within 20, partitioning within 10 and 20, finding 1 more or less within 10 and 20, and linking addition and subtraction.

✓ Number sequences
Children will practise identifying numbers before and after up to 100, finding missing numbers up to 20, and counting forwards and backwards in 2s and 10s up to 100.

✓ Fractions
Children will practise recognising and naming fractions of shapes or objects ($\frac{1}{2}$ and $\frac{1}{4}$).

✔ Place value

Children will practise understanding place value (TU), rounding to the nearest 10, and estimating the position of numbers on a number line from 0 to 100.

✔ Subtraction

Children will practise vertical and mental subtraction (TU) with and without exchange, subtracting multiples of 10, and solving missing number calculations up to 100.

✔ Multiplication

Children will practise understanding equal groups and multiplication, learning the 2x, 5x, and 10x tables, and using arrays.

✔ Number sequences

Children will practise finding missing numbers up to 100 and counting forwards and backwards in 2s, 3s, 5s, and 10s from any number.

✔ Division

Children will practise dividing by 2, 5, and 10, as well as halving and quartering numbers.

✔ Number bonds

Children will practise number bonds to 100.

Year 2

$8 \times 9 = 72$

$5 + 7 = 12$

$100 - 63 = 37$

$45 \div 9 = 5$

✔ Number sense

Children will practise linking multiplication and division, finding 10 more or less, and applying the Commutative Law in addition within 100.

✔ Addition

Children will practise adding three one-digit numbers, adding multiples of 10, adding up to four one-digit or one- and two-digit numbers to 100, and performing mental and vertical addition (TU) with and without carrying.

✔ Fractions

Children will practise recognising and naming fractions of shapes or objects objects ($\frac{1}{2}$, $\frac{1}{4}$, $\frac{2}{4}$, $\frac{3}{4}$, $\frac{1}{3}$) and placing simple fractions on a number line ($\frac{1}{2}$ and $\frac{1}{4}$ up to 10).

✓ Place value

Children will practise understanding numbers to 1,000, place value (HTU), comparing and ordering numbers to 1,000, and rounding to the nearest 10 or 100.

✓ Subtraction

Children will practise subtracting fractions with the same denominator within a whole, mental subtraction of hundreds, tens, and units (HTU) with and without exchanges, and vertical subtraction for HTU with and without exchange.

✓ Division

Children will practise dividing by 3, 4, and 8, and finding fractions of a number ($\frac{1}{3}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{1}{10}$).

✓ Number sequences

Children will practise finding 10 and 100 more or less (HTU), solving missing number calculations up to 1,000, estimating addition and subtraction, using mathematical language for multiplication and division, and linking addition and subtraction to 1,000.

✓ Number sense

Children will practise finding 10 and 100 more or less (HTU), solving missing number calculations up to 1,000, estimating addition and subtraction, using mathematical language for multiplication and division, and linking addition and subtraction to 1,000.

Year 3

$8 \times 9 = 72$

$100 - 63 = 37$

$5 + 7 = 12$

$45 \div 9 = 5$

✓ Addition

Children will practise mental addition of hundreds, tens, and units (HTU) with and without carrying, add fractions with the same denominator within a whole, and use vertical addition for HTU with and without carrying.

✓ Multiplication

Children will practise the 3x, 4x, and 8x tables, and multiply 2-digit numbers by 1-digit numbers with and without exchanges.

✓ Fractions

Children will practise recognising, naming, comparing, and ordering fractions. They will also practise finding equivalent fractions, placing fractions on a number line, and counting in tenths.

✓ Place value

Children will practise comparing numbers up to 10,000 and to 1 decimal place, understanding place value, and rounding to the nearest 10, 100, 1,000, and whole number.

✓ Subtraction

Children will practise subtracting decimals and fractions, and performing mental and vertical subtraction of 4-digit numbers.

✓ Division

Children will practise dividing by numbers up to 12 (including with remainders), dividing by 10, 100, and 1,000 (including decimals), and finding fractions of a number.

✓ Number sense

Children will practise multiplication laws, function machines, linking operations, multiplying and dividing by 0, 1, and themselves, related operations, rounding, and finding 10, 100, or 1,000 more or less.

✓ Number sequences

Children will practise counting forward and backward in 25s and 1,000s, counting through 0 to negative numbers, and recognising varied number patterns.

Year 4

$8 \times 9 = 72$

$100 - 63 = 37$

$5 + 7 = 12$

$45 \div 9 = 5$

✓ Fractions

Children will practise converting common fractions to decimals and understanding equivalent fractions.

✓ Addition

Children will practise mental and vertical addition of 4-digit numbers, adding decimals with one decimal place, and adding fractions with the same denominator.

✓ Multiplication

Children will practise multiplication tables (up to x12), scaling problems, 2-digit and 3-digit by 1-digit multiplication, multiples of 10/100 by 1-digit, and various multiplication strategies.

✓ Decimals

Children will practise understanding decimal place value to tenths, counting in hundredths, and working with decimals that total 1.

✓ Place value

Children will practise comparing and understanding place value of numbers up to 1,000,000, rounding to the nearest 10 to 100,000, and working with negative numbers on a number line.

✓ Subtraction

Children will practise subtracting decimals across whole numbers and up to 2 decimal places, subtracting fractions with related denominators, and subtraction up to 6 digits.

✓ Fractions

Children will practise skills in converting between decimals, fractions, and percentages, understanding improper fractions and mixed numbers, comparing and visualising equivalent fractions, and placing fractions on a number line.

✓ Number sequences

Children will practise identifying missing numbers up to 1,000,000 and recognising number patterns, including multiples.

✓ Addition

Children will practise adding decimals across whole numbers and up to 2 decimal places, addition up to 6 digits, and adding fractions with related denominators.

Year 5

$8 \times 9 = 72$

$5 + 7 = 12$

$100 - 63 = 37$

$45 \div 9 = 5$

✓ Number sense

Children will practise finding numbers more or less by 10 to 100,000, using order of operations, solving two-step and multi-step problems, and understanding prime numbers.

✓ Multiplication

Children will practise skills in cubed and square numbers, multiplying various numbers, and understanding multiples.

✓ Division

Children will practise dividing up to 3-digit numbers, finding fractions of a number, multiplying and dividing by 10, 100, and 1,000, calculating common percentages, and understanding factors.

✓ Decimals

Children will practise understanding and ordering decimal place value to hundredths, rounding decimals with two decimal places to the nearest tenth and whole number, and comparing numbers up to two decimal places.

✓ Place value
Children will practise skills related to numbers and place value up to 10,000,000, including comparing and rounding these numbers, as well as comparing numbers to three decimal places.

✓ Addition
Children will practise skills in adding decimals up to three decimal places, improper fractions, mixed numbers, and negative numbers.

✓ Number sense
Children will practise skills using the order of operations with brackets and solve one-step and two-step equations.

✓ Decimals
Children will practise skills in understanding decimal place value (tenths, hundredths, thousandths), rounding decimals to the nearest hundredth, and ordering decimals.

✓ Division
Children will practise skills in dividing decimals, proper fractions, mixed numbers, and up to 4-digit numbers by 1-digit numbers, as well as large numbers by multiples of 10, 100, and 1,000, and calculating percentages of quantities.

Year 6

✓ Subtraction
Children will practise skills in subtracting improper fractions, decimals up to three decimal places, mixed numbers, and negative numbers, as well as adding and subtracting fractions less than 1 with unrelated denominators.

✓ Number sequences
Children will practise skills related to number patterns, including square, triangular, and Fibonacci numbers, and learn how to identify rules to continue a pattern.

$8 \times 9 = 72$

$100 - 63 = 37$

$5 + 7 = 12$

$45 \div 9 = 5$

✓ Fractions
Children will practise skills in converting decimals to fractions in simplest form, comparing fractions, decimals, and percentages, simplifying fractions, comparing fractions (including those greater than 1), and understanding fractions to the thousandths place.

✓ Multiplication
Children will practise skills in multiplying fractions and mixed numbers by whole numbers, 4-digit numbers by multiples of 10, 100, and 1,000, 3- and 4-digit numbers by 2-digit numbers, and decimals by 1-digit numbers and powers of 10.

Interested in trying our new Fluency Booster?

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