



# Introducing... 'Maths Rockets'.

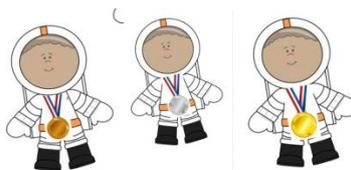
One of the aims of the National Curriculum for mathematics is to develop children's fluency in the basics of mathematics. At Front Street, we encourage this through our home-school 'Maths Rockets'. The awards are split into 'Platinum', 'Gold', 'Silver' and 'Bronze'. Each child has the opportunity to earn these badges by learning the following:

Year	Bronze	Silver	Gold	Platinum
<b>Nurs</b>	Bronze - count 10 items correctly and know total	Silver - recognise no 1-5 and match to correct amount	Gold - recognise numbers to 10 and rote count to 20	Platinum- recognise numbers to 15 and count back from 15 to 0
<b>Rec</b>	Rotate count from 0-20 then 20-0 and recognise numbers 0-20 in a random order	1 more / 1 less 5 random questions for each using number 0-20 Demonstrate 5 different 1 more one less practically ie number line or with resources	Explain what doubling is Double numbers 0-10 Then write numbers 0-20 correctly formed	Explain what halving is Half even numbers from 2-20 Practically demonstrate sharing into groups Some with remainders
<b>1</b>	Count fluently forwards in multiples of 2 and 10 to 24 and 100.	Count fluently forwards in multiples of 2, 5 and 10 from zero to 20, 50 and 100. Recognise odd and even numbers to 10.	Count fluently forwards and back in multiples of 2, 5 and 10 starting from different multiples. Recognise odd and even numbers to 20.	Given a number and identify one more and one less than a number. Counting forwards and backwards and across 100 from any given number.
<b>2</b>	Fluently recite the 2 and 10 times tables . Answer multiplication and division facts out of order for these tables. Recognise odd and even numbers. Recall doubles of all numbers to 10 and corresponding halves.	Fluently recite 2, 5 and 10 multiplication tables. Answer multiplication and division facts out of order for these tables. Count in multiples of 3 to 36.	Fluently recite the 3 multiplication table to twelfth multiple. Answer multiplication and division facts out of order for the 2, 3, 5 and 10 tables.	Say the time to the nearest 5 minutes Give an amount of money in a said number of coins, e.g. 50p in 3 coins Say 1/4, 1/2 and 3/4 of an amount of money
<b>3</b>	Fluently recite 4x multiplication table. Answer multiplication and division facts out of order for 4x table. Count in multiples of 8.	Fluently recite the 8x multiplication table. Answer multiplication and division facts out of order for this x table. Count forwards from zero in steps of 50 and 100 to 1000 and back again.	Answer multiplication and division facts out of order for all x tables learnt so far: 2, 3, 4, 5, 8 and 10 tables. Count up and down in eighths to 1 and recognise simplified equivalent versions of the fractions (visual prompt): $2/8 = 1/4$ $4/8 = 1/2$ $6/8 = 3/4$ Use division facts to find $\frac{1}{4}$ and $\frac{3}{4}$ of numbers within tables range.	Use multiplication facts in different ways to create the same number e.g. $12 = ? \times ? = ? \times ?$ Answer missing number multiply and divide questions using inverse.  Find 1/8 and 2/8 of numbers within tables range.
<b>4</b>	Fluently recite the 7 and 9 multiplication tables and answer multiplication and division facts out of order.	Fluently recite any requested table to 12 x 12 and answer multiplication and division facts out of order. Count forward from zero in steps of 25 to given number and back again.	Use known facts and place value to calculate quickly e.g. $20 \times 4$ , $150 \div 3$ , $80 \times 6$ . Use division facts to find quickly a unit fraction e.g. $\frac{1}{2}$ , $1/5$ , $1/8$ of a given number. Identify factor pairs of any number up to 50.	Answer questions about times tables from 1 -12 within a specified time limit.
<b>5</b>	Fluently recite any given table up to 12 x 12 and answer multiplication and division facts out of order.	Find factor pairs of any number in the tables to 12 x 12. Quickly identify factors that	Use known facts and place value to calculate quickly e.g. $0.6 \times 7$ , $2.4 \div 6$ . Use division and multiplication to find non unit fractions of numbers within	To know cube numbers to $12 \times 12 \times 12$ . To find missing values presented in a range



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	Count on or back from any multiple of 25, 50 or 100 in steps of 25, 50 or 100.	two given number have in common. Recall prime numbers to 50 and square numbers to 12x12.	tables range e.g. $\frac{3}{4}$ of 20, $\frac{5}{7}$ of 35, $\frac{6}{9}$ of 81	of different ways, including missing number calculations, area, perimeter and angle work. To know fraction, decimal and percentage equivalents and use this to solve problems.
6	Fluently recite any given table to 12 x 12 and answer multiplication and division facts out of order.  Identify prime numbers up to 50.  Use known facts and place value to calculate mentally e.g. $200 \times 3$ , $40 \times 6$ , $360 \div 6$ , $7.2 \div 9$ , $0.6 \times 8$ .	Mentally divide 3 digit number by a single digit using tables facts to partition the number e.g. $372 \div 6 = (360 + 12) \div 6$ , $434 \div 7 = (420 + 14) \div 7$ . Identify prime numbers up to 100 e.g. which numbers between 80 and 90 are prime? Find e.g. $\frac{1}{3}$ of $\Delta = 21$ , $\frac{1}{5}$ of $\Delta = 2.5$	Use multiplication facts and range of strategies to quickly multiply 3 numbers including cubes of number to 10 e.g. $6 \times 6 \times 6$ , $5 \times 17 \times 2$ , $7 \times 4 \times 5$ , $6 \times 8 \times 4$ , $3 \times 8 \times 5$ . Express any number up to 100 as the product of its prime factors. Find e.g. 18 is $\frac{2}{3}$ of ?, 35 is $\frac{5}{7}$ of ? <a href="http://www.mathsisfun.com/prime-factorization.html">http://www.mathsisfun.com/prime-factorization.html</a> is one site where children can explore this for themselves if required.	Link knowledge of times tables, place value, squares and cubes to look at order of operations.



Please take time to look through your child's year group expectations for their rocket awards. We will be working on these skills at school, but would love it if you could also work together on these at home. As your child has moved into a new year group, the challenge will be greater. Please support us in helping your child in becoming fluent in their recall of maths skills.

**Remember: it is a National Curriculum requirement that children know all of their times tables up to 12 x 12, by the end of Year 4.**

You can practice these at any time at home. Apps and online maths games would be really useful in developing fluency. There are thousands of free apps available, but we would encourage your child to have 5 minutes each day on Times Tables Rockstars app. We would also like to stress how valuable it is for children to be fluent and confident in their times tables as soon as possible to help them succeed in maths.

When children have demonstrated that they can reach a 'Maths Rocket' then they will be awarded a badge for that level. Awards will be given each half term in school and sometimes displayed in classrooms.

Thank you for your support.