



WHAT DOES MATHS LOOK LIKE IN YEAR 2?

MEANINGFUL MATHS



Mathematics Hub

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YEAR 2 MATHEMATICS AT SCHOOL: WHAT TO EXPECT

By the end of the year, your child will be meeting the Year 2 mathematics standard if ...

... they are solving realistic problems using their growing understanding of number, algebra, space, measurement and statistics. They will be thinking about and describing numbers in different ways. When solving number problems, they will make them easier to solve by adjusting the numbers involved. For example, $8 + 5$ could become $8 + 2 + 3$. They may use their fingers to help them keep track of numbers.

FOCUS ON NUMBER

During Year 2 at school, a large part of mathematics teaching time will focus on number learning.

To meet the standard, your child will be learning to:

- use a range of strategies to make calculations involving one- and two- digit numbers
- notice and create patterns using numbers, shapes and objects
- recognise halves, quarters and eighths in various situations
- tell analog clock times to the hour, half-hour and quarter-hour
- pose and explore questions, and represent findings
- give and follow directions regarding location, and refer to maps
- measure length with informal units such as a hand, foot, pencil or paperclip.

This is a small part of the skills and knowledge your child is learning in order to meet this standard. Talk to the teacher for more information about your child's learning.



THE WAY YOUR CHILD is learning to solve maths problems may seem strange. Ask questions. Get your child to show you how they do it and support them in their learning.



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MEANINGFUL MATHS

Level 1—Stage 4 Advanced Counting

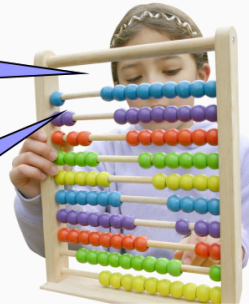
Multiplication & Division

I can skip count forwards and backwards to 100 in twos, fives and tens.

I know doubles and matching halves to 20.

I can solve multiplication problems using skip counting. e.g. 4×2 as 2, 4, 6, 8

I can solve division problems using: skip counting, fair sharing, using my doubles or halves to 20.



Reference: Ministry of Education (2008), The Number Framework—Book 1.

Starting to do these by the end of Year 2

Level 2—Stage 5 Early Additive

Addition & Subtraction

I can solve addition and subtraction problems in my head using my basic facts:

Doubles
 $8 + 7 = 8 + 8 - 1$

Fives
 $8 + 7 = 5 + 3 + 5 + 2$

Making Tens
 $8 + 7 = 8 + 2 + 5$

Reference: Ministry of Education (2008), The Number Framework—Book 1.

Tidy Numbers
 $29 + \square = 52$ as $29 + (1 + 22)$

Place Value
 $33 + 16$ as $30 + 10 + 3 + 6$

Back through ten
 $84 - 4 = 4 = 76$



Level 2—Stage 5 Early Additive

I can find fraction of a number using halving, known addition facts or some simple multiplication facts. e.g. $1/3$ of 12 is 4 because $3 + 3 + 3 = 9$ so $4 + 4 + 4 = 12$

I know the symbols for halves, thirds, quarters, fifths and tenths.

I can order fractions with the same denominators, e.g. $\frac{1}{4}$, $\frac{2}{4}$, $\frac{3}{4}$

I know the symbols for improper fractions.

Proportions & Ratios

I can solve division problems with remainders using halving, known addition facts or some simple multiplication facts. e.g. 7 pies shared with 4 people ($7 \div 4$) by giving each person 1 pie, and $1/2$ pie, then $1/4$ pie



Reference: Ministry of Education (2008), The Number Framework—Book 1.

Moving from Stage 4 to 5

Level 1—Stage 4 Advanced Counting

Addition & Subtraction

I can solve subtraction problems by counting back from the largest number.

$$32 - 3 = \square$$

32, 31, 30, 29.

I can solve addition problems by counting on from the largest number.

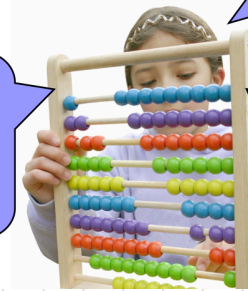
$$16 + 5 = \square$$

16, 17, 18, 19, 20, 21

I can solve addition and subtraction problems by counting on or back in ones and tens

$$35 + 30 = \square$$

35, 45, 55, 65



Level 1—Stage 4 Advanced Counting

Proportions & Ratios

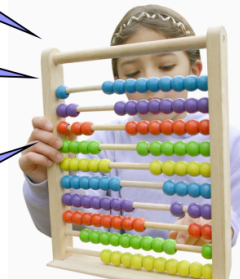
I can read $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{3}$, $\frac{1}{5}$

I can find a fraction of a set by equal sharing. I can use skip counting, known doubles or halves to help solve problems.

I know doubles to 20 and matching halves to 20.

I can share a shape into equal parts for halves, quarters, thirds and fifths.

I can find fraction of a shape or object using symmetry to create halves, quarters and eighths.



Reference: Ministry of Education (2008), The Number Framework—Book 1.

Working with larger numbers and using number properties to solve problems

Level 2—Stage 5 Early Additive

Multiplication & Division

I can solve multiplication and division problems using known simple multiplication facts or repeated halving. e.g. $20 \div 4 = \square$

$$1/2 \text{ of } 20 = 10 \text{ and } 1/2 \text{ of } 10 = 5$$

so $4 \times 5 = 20$

I can solve multiplication and division problems using repeated addition or known addition facts.

$$\text{eg. } 4 \times 6 = (6 + 6) + (6 + 6) = 12 + 12 = 24$$

I know $\times 2$, $\times 5$ and $\times 10$ multiplication facts and matching division facts.



Reference: Ministry of Education (2008), The Number Framework—Book 1.

Multiplication as repeated addition starting to recall some multiplication facts

An understanding of basic fractions and equal sharing

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Achievement Standard v9

By the end of Year 2, students order and represent numbers to at least 1000, apply knowledge of place value to partition, rearrange and rename two- and three-digit numbers in terms of their parts, and regroup partitioned numbers to assist in calculations. They use mathematical modelling to solve practical additive and multiplicative problems, including money transactions, representing the situation and choosing calculation strategies. Students identify and represent part-whole relationships of halves, quarters and eighths in measurement contexts. They describe and continue patterns that increase and decrease additively by a constant amount and identify missing elements in the pattern. Students recall and demonstrate proficiency with addition and subtraction facts within 20 and multiplication facts for twos.

They use uniform informal units to measure and compare shapes and objects. Students determine the number of days between events using a calendar and read time on an analogue clock to the hour, half hour and quarter hour. They compare and classify shapes, describing features using formal spatial terms. Students locate and identify positions of features in two-dimensional representations and move position by following directions and pathways. They use a range of methods to collect, record, represent and interpret categorical data in response to questions



Involve your child in easy, everyday activities like these

- When tidying up, sort washing, odd socks, toys or cans. Notice 'how many' are in a collection and explore ways to organise objects so they're easier to count.
- Share your favourite numbers with each other and explain why you like each number.
- Play with numbers as they come up in the environment. Share what you notice and wonder about numbers on number plates, price tags and birthday dates.
- Do a shape and number search together wherever you are, such as, the number of shoes or the shapes of doors and windows.

Mathematics is an important part of everyday life and there are lots of ways you can make it fun for your child.

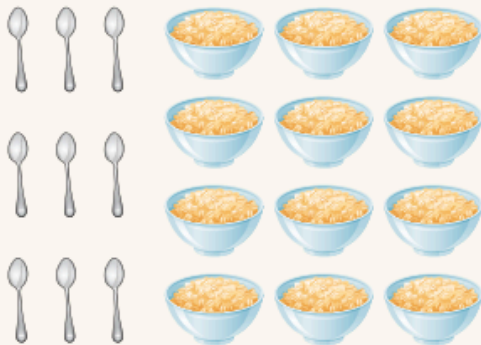
Being positive about mathematics is really important for your child's learning – even if you didn't enjoy it or do well at it yourself at school.

MATHEMATICS PROBLEMS AT THIS LEVEL MIGHT LOOK LIKE THIS:

Imagine there are 9 spoons and 12 bowls.

Each bowl needs a spoon.

For each bowl to have a spoon, how many more spoons are needed?



I worked this out by counting on from 9 – so, 10, 11, 12. I found 3 more spoons are needed.



Ask the teacher what your child is doing in mathematics. Talk about how you can work together to support your child's learning.