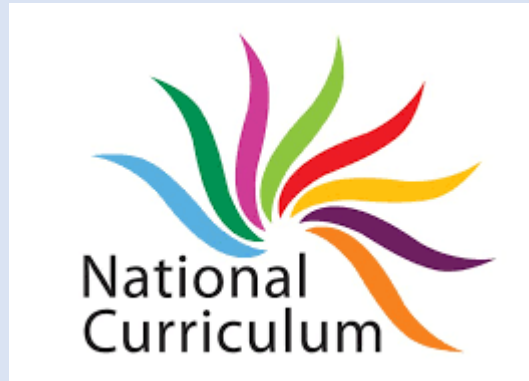




Friday 6th February 2026
Maths Parent Workshop

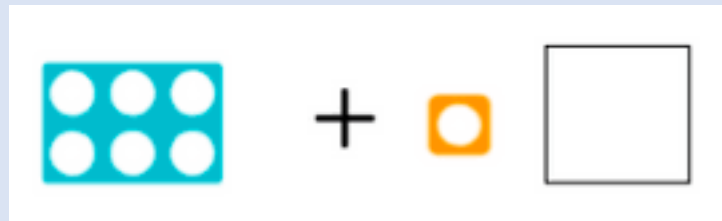


- New National Curriculum in 2014. Focus on ‘mastery,’ moving children away from procedural based understanding.
- Interest in high performing countries including Singapore, China and North Korea.
- Ensuring high expectations for all. No child left behind.
- Focus on challenge through rich and sophisticated problem solving activities.

Mastery based progression approach: Concrete, pictorial and abstract learning.

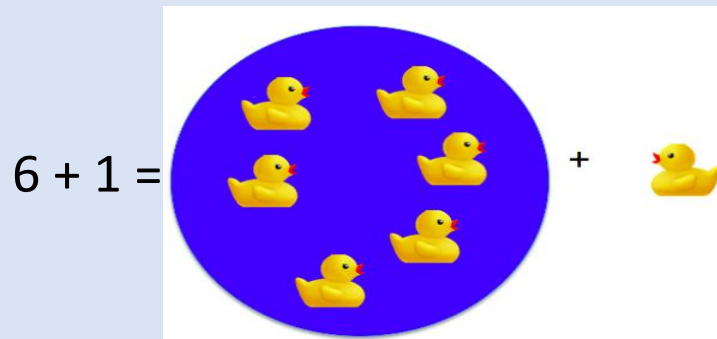
- Develop children's conceptual understanding of number using:

- Concrete



- Pictorial

- Abstract



Example:

$$6 + 3 =$$

Concrete – pictorial – abstract

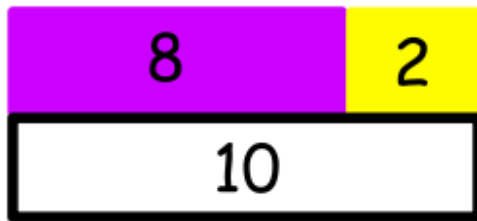
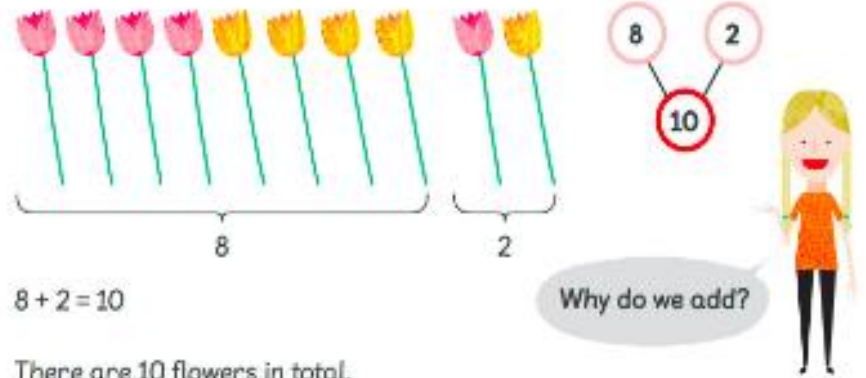
Bar modelling

Concrete - modelling with real objects



Should we add or subtract to find the total number of flowers?

There are 8 flowers in the vase.
There are 2 flowers in Hannah's hand.
How many flowers are there in total?



Example:

Jacqueline had 6 marbles, Jo gave her 5 more. How many marbles are there altogether?

We would represent this problem in a bar model, this helps children to visualise the calculation.

Maths Learning by **end** of Year 1

- Count to and across 100, forwards and backwards. Beginning with 0 or 1, or from any given number. Find one more and one less than a number. Read and write numbers to 100 in numerals
- Understand the **place value** of two digit numbers
- Count in multiples of twos, fives and tens forwards and backwards
- Recognise odd and even numbers
- Represent and use **number bonds** and related subtraction facts within 20
- Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs
- Add and subtract one-digit and two-digit numbers to 20, including zero
- Solve one-step problems that involve addition and subtraction, use concrete objects and pictorial representations, and missing number problems such as $7 = \underline{\quad} - 9$
- Understand '=' as a balancing sign

Place value is a very important concept for children to understand.

Place value explains what each digit in the number is worth, what is its value.

Place Value

We use Dienes to make different numbers and to see the value of each digit. Firstly make the number 4.

tens	ones

Now add a 10 to make 14.



Challenge: can we make 41? What is the value of the 4?

Maths Learning by **end** of Year 1

- Count to and across 100, forwards and backwards. Beginning with 0 or 1, or from any given number. Find one more and one less than a number. Read and write numbers to 100 in numerals
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- **Represent and use number bonds and related subtraction facts within 20**
- Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs
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Activity Time

Work in groups of 4.

- ① Make number bonds of 6.
- ② Put  on the  to show different ways to make 6.
- ③ Take turns to make number bonds for different numbers.

What you need:



How many number bonds can you make?

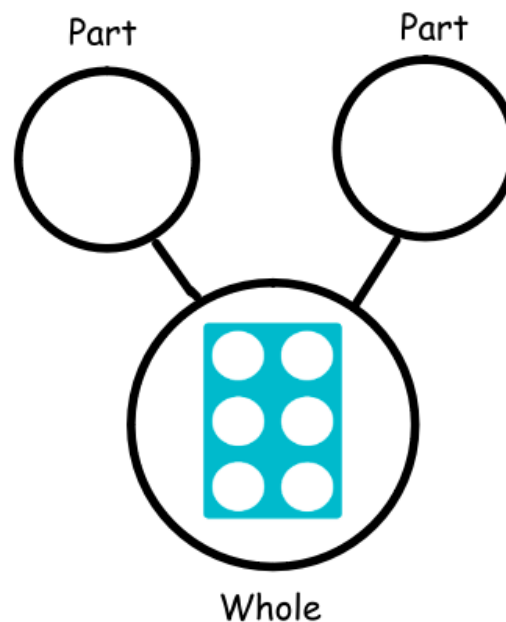
Write the 'Fact families' for each number bond to 6. Eg

$$5 + 1 = 6$$

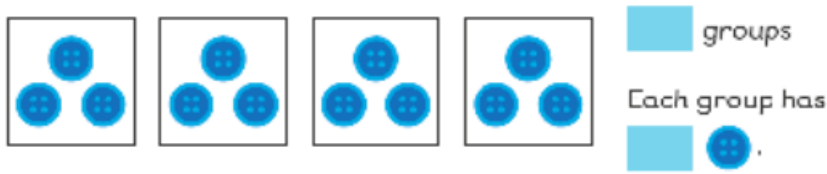
$$1 + 5 = 6$$

$$6 - 5 = 1$$

$$6 - 1 = 5$$



- Solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher (grouping and sharing)
- Recognise, find and name a half as one of two equal parts of an object, shape and quantity to 20
- Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity to 20
- Recognise and name common 2D and 3D shapes
- **Measure and begin to record the following:**
- Recall language related to dates, days of the week, month, years
- Tell time to nearest hour
- Measure mass, height and capacity and compare using language 'heavier/lighter, longer/shorter, full/empty' etc



Let's write a repeated addition sentence.



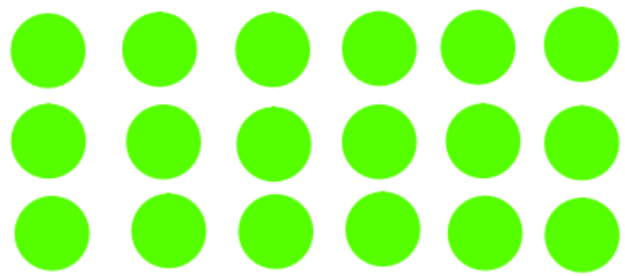
We can also write a multiplication sentence.



Make an array for the number sentence:

6×3 or 6 lots of 3.

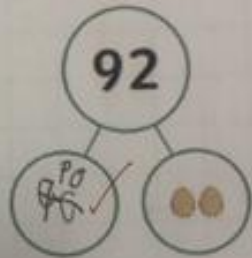
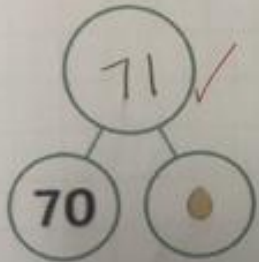
3×6 or 3 lots of 6



Challenge: write some repeated addition and multiplication sentences for the arrays on your table.

Maths Learning by end of Year 2

- Count in steps of 2, 3 and 5 from 0 and any other one digit number, forward or backward and in steps of 10 from any number
- Recognise the place value of each digit in a three-digit number (hundreds, tens, ones). Understand 0 as a place holder
- Compare and order numbers from 0 up to 200; use $<$, $>$ and $=$ signs
- Represent and estimate numbers to 200 using different pictorial representations
- Read and write numbers to 200 in numerals and to 100 in words
- Use place value and number facts to solve problems (e.g. using partitioning to add and subtract mentally, e.g. $23 = 20 + 3$ and $23 = 10 + 13$)



CHALLENGE!

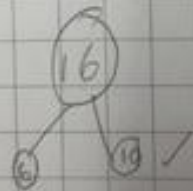
Write the addition number sentences in your books



$$10 + 10 = 20 \checkmark$$

$$20 = 10 + 10 \checkmark$$

$$20 - 10 = 10 \checkmark$$



$$6 + 10 = 16 \checkmark$$




$$16 = 10 + 6 \checkmark$$

$$16 - 10 = 6 \checkmark$$

$$16 = 10 + 10 \checkmark$$

Maths Learning by end of Year 2

- Count in steps of 2, 3 and 5 from 0 and any other one digit number, forward or backward and in steps of 10 from any number
- Recognise the place value of each digit in a three-digit number (hundreds, tens, ones). Understand 0 as a place holder
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- Use place value and number facts to solve problems (e.g. using partitioning to add and subtract mentally, e.g. $23 = 20 + 3$ and $23 = 10 + 13$)

Hundreds 	Tens 	Ones 

Mentally

$23 + 10 =$

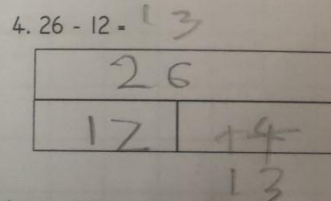
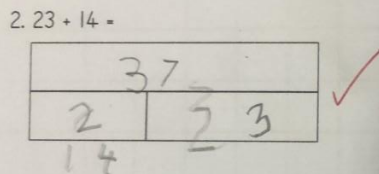
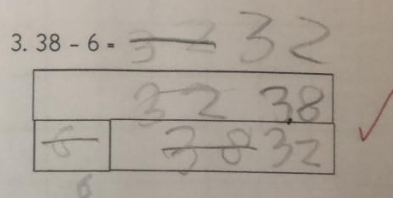
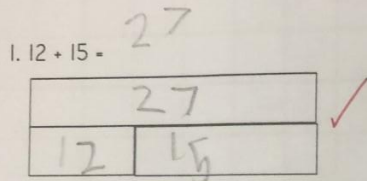
$23 + 20 =$

$103 + 10 =$

$120 + 24 =$

- Add and subtract numbers mentally including *A two-digit number and ones *A two digit number and tens *Two, two digit numbers *Three one digit numbers
- Show that addition of two number can be done in any order (commutative) and subtraction of one number from another, cannot
- Recognise and use the inverse relationships between addition and subtraction and use this to check calculations and missing number problems
- Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100
- Solve problems involving missing numbers

Fill in the bar models to solve these addition and subtraction calculations.



Use a ruler to draw bar models in your book to solve these addition and subtraction calculations:

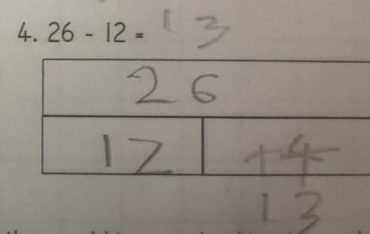
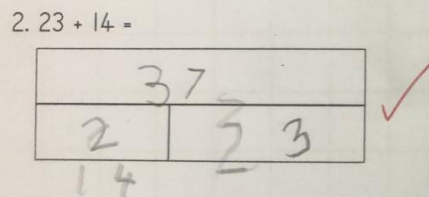
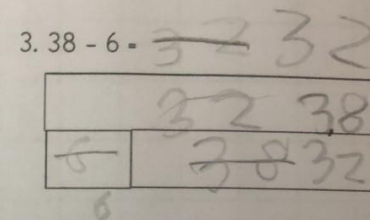
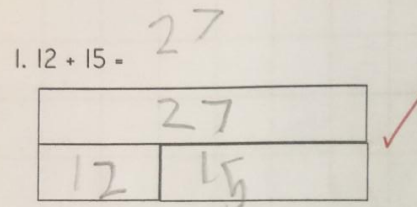
5. $11 + 17 =$

7. $19 - 7 =$

6. $22 + 26 =$

8. $35 - 23 =$

Fill in the bar models to solve these addition and subtraction calculations.



Use a ruler to draw bar models in your book to solve these addition and subtraction calculations:

5. $11 + 17 =$

7. $19 - 7 =$

6. $22 + 26 =$

8. $35 - 23 =$

There can be some common misconceptions around bar modelling.

- **Fractions**

- Recognise, find, name and write fractions $\frac{1}{3}$ $\frac{1}{4}$ $\frac{2}{4}$ and $\frac{3}{4}$ of a length, shape, set of objects or quantity
- Write simple fractions, e.g. $\frac{1}{2}$ of 6 = 3 and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$
- Order fractions and equivalence using models
- Understand tenths = ten equal parts
- Count up and down in tenths, over 1 whole

- **Money**

- Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change.

To find a fraction of an amount, we firstly divide it by the denominator.

Would you....

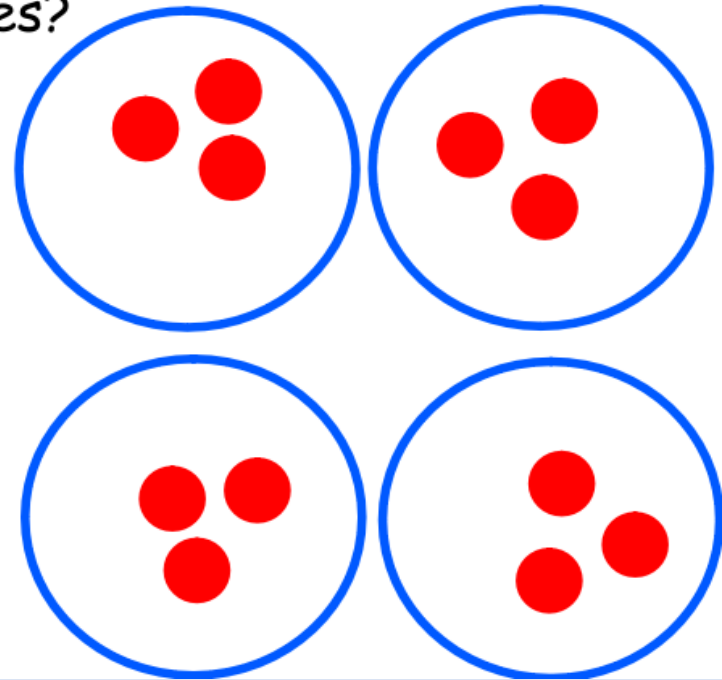
share?

use your knowledge of multiples?

draw groups?

$\frac{1}{4}$ of 12

The numerator tells us how many of these groups we want.

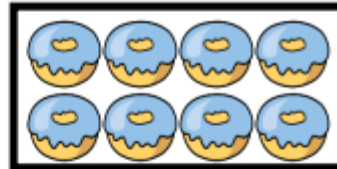


Maths mastery

Can children apply their knowledge in other contexts. Can they use their subtraction knowledge to work out change? Can they solve two step word problems?

Addition

Louise doubles her donuts. The picture shows what she had after she doubled her donuts.



Whitney



Louise started with 4 and ended with 8 donuts.

Eva



Louise started with 8 and ended with 16 donuts.

Mo



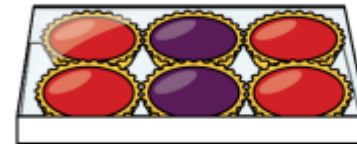
Louise started with 2 and ended with 4 donuts.

Who do you agree with? Explain why.

Whitney has 3 jam tarts.



Tommy has 6 jam tarts.



Altogether they have 9 jam tarts.

$$3 + 6 = 9$$

So

$$\underline{\quad} + \underline{\quad} = 90$$

What if all of the red jam tarts are eaten?

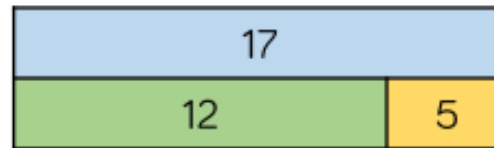
What if all of the purple jam tarts are eaten?

Maths mastery

Can children apply their knowledge in other contexts. Can they use their subtraction knowledge to work out change? Can they solve two step word problems?

Subtraction

Can you use inverse operations to check $5 + 12 = 17$?



How many possible inverse calculations are there?

Eva writes this calculation: $18 - 5 = 13$

Which of the following could she use to check her work?

$13 + 5$

$13 - 5$

$18 - 13$

$5 + 13$

Maths mastery

Can children apply their knowledge in other contexts. Can they use their subtraction knowledge to work out change? Can they solve two step word problems?

Multiplication



$$3 + 3 + 3 = 3 \times 3$$

Is Mo correct? Explain why.

Draw an image to help you.

Use $<$, $>$ or $=$ to make the statements correct.

3×5



$5 + 5 + 5 + 5$

2×2



$2 + 2$

10×2



$5 + 5 + 5$

•THANK YOU!

- Questions?

- Useful links:

- <https://www.topmarks.co.uk/maths-games/5-7-years/counting>

- <https://nrich.maths.org/>