Welcome to our

Maths Information Evening

November 2024

Maths Curriculum Meeting for Parents

The seven domains

There are seven domains of maths covered in Key Stage 1

NUMBER

- **PLACE VALUE**

NUMBER

- **ADDITION & SUBTRACTION**

NUMBER

- **MULTIPLICATION & DIVISION**

FRACTIONS

RECOGNISE AND FIND FRACTIONS OF SHAPES AND QUANTITIES

MEASURES

ESTIMATE AND MEASURE IN STANDARD UNITS, COMPARE AND ORDER MEASURES, USE £ AND P, TELLING THE TIME

STATISTICS

INTERPRET AND CONSTRUCT PICTOGRAMS, TALLY CHARTS, BLOCK GRAPHS AND TABLES

GEOMETRY

PROPERTIES OF SHAPES, POSITION AND DIRECTION

Mathematics
National Curriculum

There are three key principles applied across all domains

1. **Fluency**
2. **Reasoning**
3. **Problem solving**

Aims

The national curriculum for mathematics aims to ensure that all pupils:

- 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.
- **reason mathematically** by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language
- can **solve problems** by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

Fluency

The application of maths knowledge and number facts across domains in maths.

When children are fluent they are able to calculate efficiently and accurately and be flexible in their choice of strategies to solve calculations and problems.

They feel confident when working with numbers and can apply their understanding in different contexts.

Fluency

A child in Key Stage 1, is expected to know how to count in 2s.

As they become *fluent* with this known number sequence they should transfer their knowledge and apply it to...

2 X TABLES	DIVISION BY 2	EVEN NUMBERS	HALF
DOUBLE	CALCULATIONS FOR MULTIPLES OF 2, 20	MONEY 2P, 20P	MEASURES 2CM, 20CM

Problem Solving

Statutory requirements

Pupils should be taught to:

- read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs
- represent and use number bonds and related subtraction facts within 20
- add and subtract one-digit and two-digit numbers to 20, including zero
- solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = ☐ – 9.

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

Using materials and a range of representations, pupils practise counting, reading, writing and comparing numbers to at least 100 and solving a variety of related problems to develop fluency. They count in multiples of three to support their later understanding of a third.

Number – multiplication and division

Statutory requirements

Pupils should be taught to:

- 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.

Measurement

Statutory requirements

Pupils should be taught to:

- compare, describe and solve practical problems for:
  - lengths and heights [for example, long/short, longer/shorter, tall/short, double/half]
  - mass/weight [for example, heavy/light, heavier than, lighter than]
  - capacity and volume [for example, full/empty, more than, less than, half, half full, quarter]
  - time [for example, quicker, slower, earlier, later]

Problem Solving

This underpins all the maths that we teach at Fleet Infant School and is key to children developing fluency and reasoning in maths.

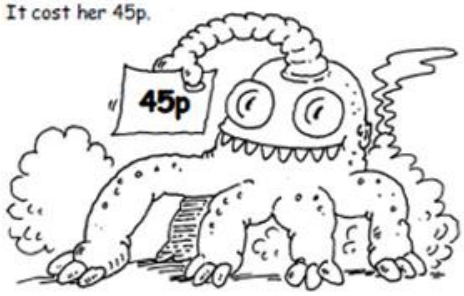
It is a key factor in developing fluency and reasoning skills

Children need to solve real life maths problems so that they are equipped to apply mathematical knowledge in every day life.

Open & close-ended questions

Monster

Alesha bought a monster using only silver coins.
It cost her 45p.



There are nine different ways to pay 45p exactly using only silver coins.
Find as many as you can.

What if the monster cost 50p?
How many different ways are there to pay now?

40 - ☐ = 22+10

There are 21 cakes in a box. How many will 3 people get each?

Sweets are sold in packets of 10. 90 sweets have been made. How many packets of sweets are there?

19.11.24 LO: To count in 2's.

1. Each spaceship has space for 2 aliens. There are 10 aliens altogether. How many spaceships do we need?

____spaceships

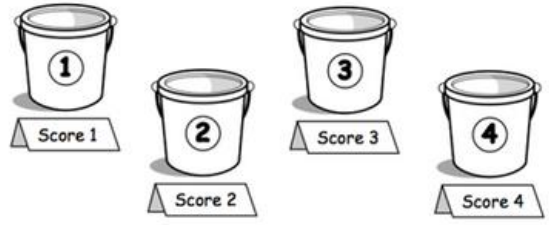
1. What if there were 16 aliens altogether. How many spaceships do we need?

____spaceships

If 66 people were on a plane and 10 got off, how many were left on the plane?

Jon saw 32 boys and 18 girls at the park. How many children did Jon see altogether?

Ben threw 2 bean-bags. Each bag went in a bucket.
More than one bag can go in a bucket.



What different scores can you make?

Reasoning

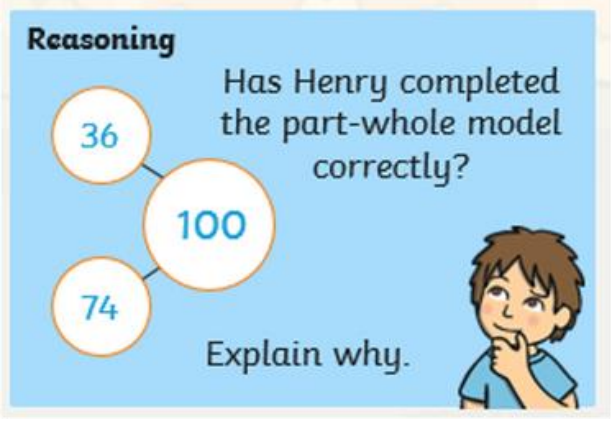
- **Reasoning in maths is the ability to use what you already know to help you predict what might happen, arrive at an answer, or explain whether an answer is correct or not.**

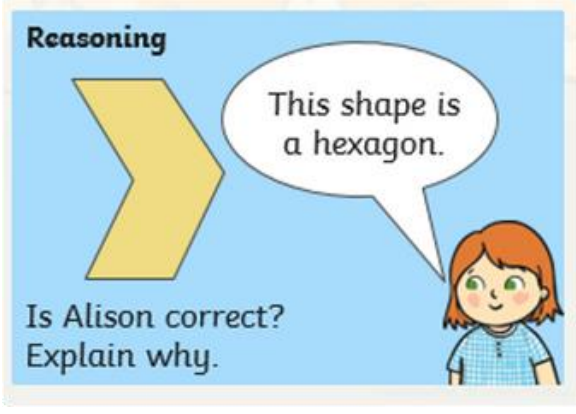
- **It can also help you to find the best way to solve a new problem or explain how you solved it.**

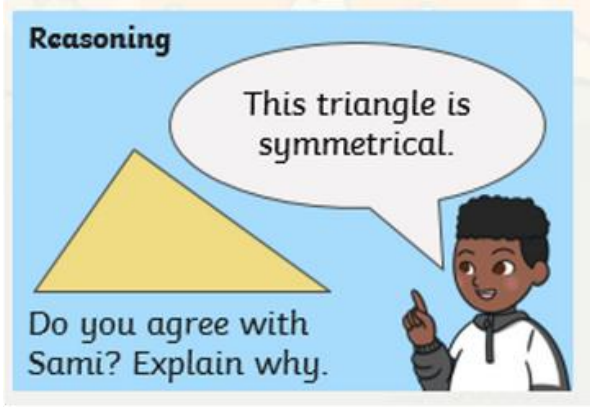
- **It can be as simple as;**

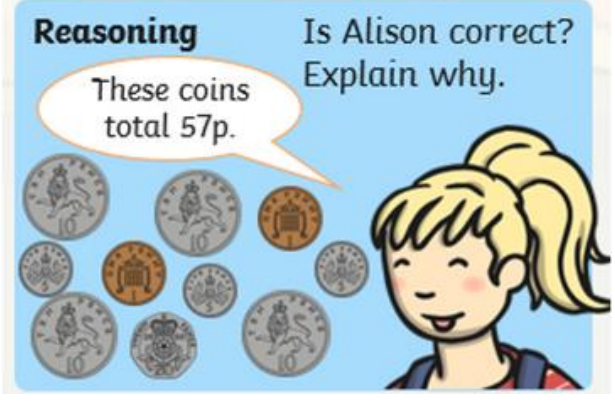
  ‘I know that 5+5 = 10 so 5+6 is 11 as it is one more’

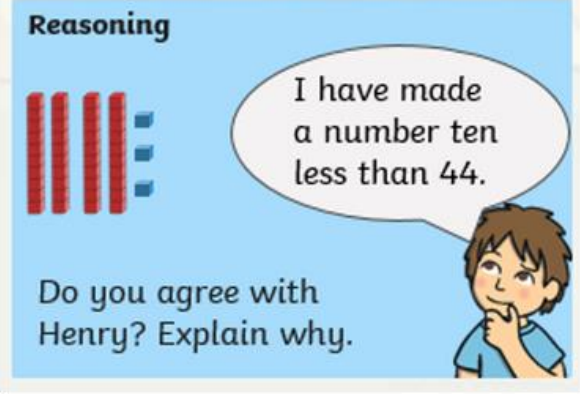
Examples of reasoning across the domains











I agree, I don't agree because I know....

Reasoning

- **Our children are given opportunities to reason frequently in maths lessons using taught mathematical vocabulary and their knowledge.**

- **We also teach children to reason using guided reasoning.**

Sam says there are 31 as there are 3 tens and 1 unit. Is she right?

Sam is wrong because the sticks that are tied together are the tens and those that aren't are the ones. There is 1 ten and 3 ones. There are 13 sticks.

Independent

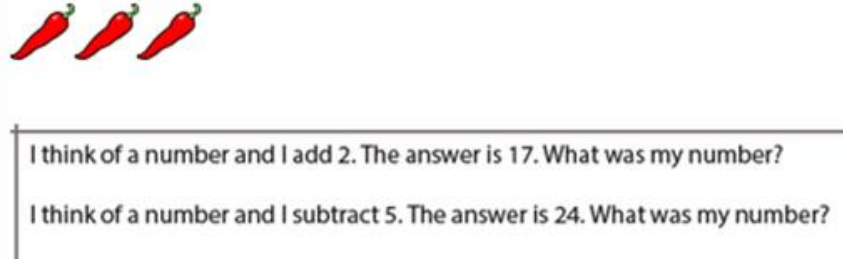
Sam says there are 12 sticks because there is 1 ten and 2 ones. Is she right? Explain your reasoning

End of Key Stage expectations

- As you can see the emphasis is on fluent basic mathematical knowledge and skills which can then be applied to new problems.

- The children are expected, by the end of the Key Stage, to be confident at manipulating numbers to 100 in a variety of increasingly challenging problem solving situations.

- The expectation is not that they will use bigger and bigger numbers!



We provide an additional challenge within the lesson through the use of chilli challenges

Assessment

For each unit of each phase the teacher will assess the progress of your child as;

- **Working Towards the Expected Standard**
- **Working At the Expected Standard**
- **Working at a Greater Depth within the Expected Standard.**

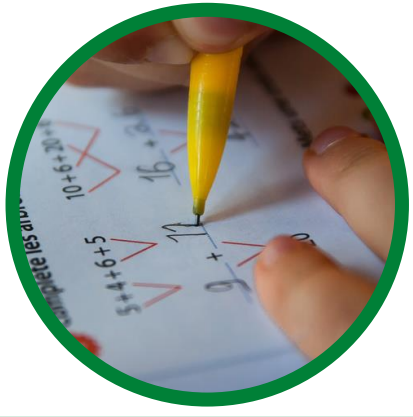
- **There is no longer formal testing for Year 2 children (SATs)**

Multiplication and division
• recall and use multiplication and division facts for the 2, and 10 multiplication tables, including recognising odd and even numbers • show that multiplication of two numbers can be done in any order (commutative) • solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods,
• recall and use multiplication and division facts for the 5 multiplication table, including recognising odd and even numbers • calculate mathematical statements for multiplication using the multiplication (×), and equals (=) signs
• calculate mathematical statements for division within the multiplication tables and write them using division (÷) • show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot

Year 1	Number and place value
Milestone1 inc ELGs	• Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number • given a number, identify one more and one less • identify and represent numbers using objects and • pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least • read and write numbers from 1 to 20 in numerals and words
Milestone 2	• count in multiples of twos, and tens
Milestone 3	• count, read and write numbers to 100 in numerals; • count in multiples of twos, fives and tens • **1NPV–1** Count within 100, forwards and backwards, starting with any number. • **1NPV-2** Reason about the location of numbers to 20 within the linear number system, including comparing using < > and = • **1NF–2** Count forwards and backwards in multiples of 2, 5 and 10, up to 10 multiples, beginning with any multiple, and count forwards and backwards through the odd numbers.

There are 3 information sessions tonight

Fluency



Problem Solving & Reasoning

Mental Maths

- **Each session will last about 15 minutes.**

- **There will be 3 sessions of each so you can go to all three or just the ones of particular interest to you.**

- **There is no obligation to stay to the end of the evening**