



HEARTSACADEMYTRUST



# Year 2

## Parents Workshop

# Maths



National Curriculum is split into different sections which cover number and shape, space and measure objectives.

# Number and Place value

- Pupils should be taught to:
- count in steps of 2, 3, and 5 from 0, and in 10s from any number, forward and backward
- recognise the place value of each digit in a two-digit number (10s, 1s)
- identify, represent and estimate numbers using different representations, including the number line
- compare and order numbers from 0 up to 100; use  $<$ ,  $>$  and  $=$  signs
- read and write numbers to at least 100 in numerals and in words
- use place value and number facts to solve problems

# Number - addition and subtraction

- Pupils should be taught to:
- solve problems with addition and subtraction:
  - using concrete objects and pictorial representations, including those involving numbers, quantities and measures
  - applying their increasing knowledge of mental and written methods
- recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100
- add and subtract numbers using concrete objects, pictorial representations, and mentally, including:
  - a two-digit number and 1s
  - a two-digit number and 10s
  - 2 two-digit numbers
  - adding 3 one-digit numbers
- show that addition of 2 numbers can be done in any order (commutative) and subtraction of 1 number from another cannot
- recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems

# Websites and apps

Squeebles

Top marks

Bbc bitesize

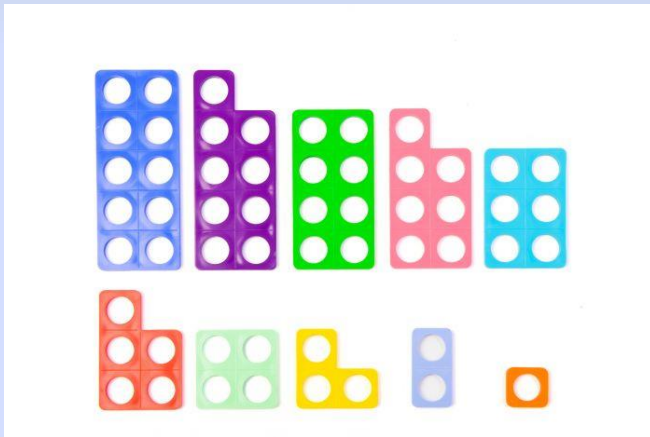
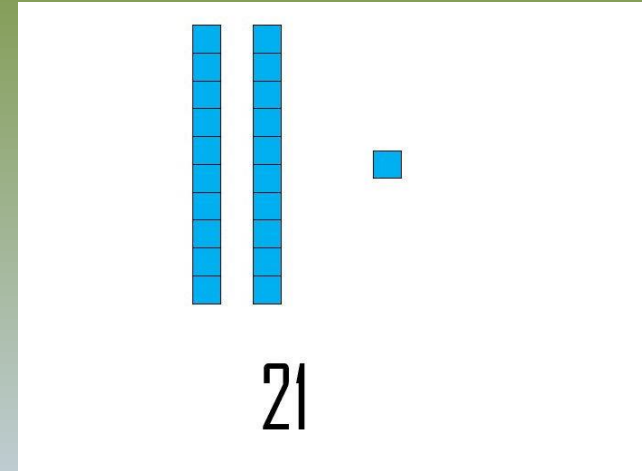
# Addition

- Place value
- Expanded method
- Compact column method
- Mental strategies



# Place value

- $43 = 40$  and  $3$
- $26 = 20$  and  $6$



# Expanded method

- $33 + 42 =$
- 30 and 3
- 40 and 2
- 70 and 5
  
- Compact Method



# Mental strategies

- At a basic level, things like concentration levels and listening skills are improved, and self-confidence is also improved as a result of practicing mental arithmetic problem solving.
- In addition, mental maths actually keeps our brains sharp, getting stronger and more efficient with use. That's why it's recommended that children continue practicing and learning mental arithmetic throughout their education.
- Mental maths also greatly improves a person's number sense, which improves the ability to understand relationships between quantities, allowing logical thinking to develop.
- By developing good mental maths skills from a young age, children are able to improve other skill sets and easily work out answers to mathematical scenarios in everyday life.

# Subtraction

- Place value
- Expanded method
- Compact column method
- Mental strategies



# Number - multiplication and division

Pupils should be taught to:

recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers

calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication ( $\times$ ), division ( $\div$ ) and equals (=) signs

show that multiplication of 2 numbers can be done in any order (commutative) and division of 1 number by another cannot

solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts

# Multiplication

- Arrays
- Lists
- Mental strategies –

Times tables – 2, 3, 5 and 10 with rapid recall of facts





# arrays

what is an array?

a set that shows equal groups in rows and columns



examples:



$$\begin{aligned} 3+3+3 &= 12 \\ 4+4+4 &= 12 \\ 4 \times 3 &= 12 \\ 3 \times 4 &= 12 \end{aligned}$$

$$\begin{aligned} 2+2+2 &= 6 \\ = 3+3 &= 6 \\ 3 \times 2 &= 6 \\ 2 \times 3 &= 6 \end{aligned}$$



$$\begin{aligned} &= 3+3=6 \\ 2+2+2 &= 6 \\ 3 \times 2 &= 6 \end{aligned}$$



$$\begin{aligned} &= 3+3+3=9 \\ 3 \times 3 &= 9 \end{aligned}$$



$$\begin{aligned} 4+4+4 &= 12 \\ = 3+3+3+3 &= 12 \\ 3 \times 4 &= 12 \end{aligned}$$



$$\begin{aligned} 2+2+2+2 &= 8 \\ = 4+4 &= 8 \\ 2 \times 4 &= 8 \\ 4 \times 2 &= 8 \end{aligned}$$

write an equation!

# Lists

XXX

XXX

XXX

XXX

XXXXXX

XXXXXX

XXXXXX

XXXXXX

XXXXXX

# Division

- Grouping
- Use of the inverse (multiplication)
- Mental strategies –

Times tables – 2, 3, 5 and 10 with rapid recall of division facts





# Number-fractions

- Pupils should be taught to:
- 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, for example  $\frac{1}{2}$  of 6 = 3 and recognise the equivalence of  $\frac{2}{4}$  and  $\frac{1}{2}$

# Measurement

- Pupils should be taught to:
- choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature ( $^{\circ}\text{C}$ ); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels
- compare and order lengths, mass, volume/capacity and record the results using  $>$ ,  $<$  and  $=$
- recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value
- find different combinations of coins that equal the same amounts of money
- solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change
- compare and sequence intervals of time
- tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times
- know the number of minutes in an hour and the number of hours in a day

# Shape

- Pupils should be taught to:
- identify and describe the properties of 2-D shapes, including the number of sides, and line symmetry in a vertical line
- identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces
- identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid]
- compare and sort common 2-D and 3-D shapes and everyday objects

- <https://www.youtube.com/watch?v=Sx73FKPmUVg&safe=true>

**SATS**

2 papers

# Paper 1 Arithmetic

- <https://www.gov.uk/government/publications/key-stage-1-tests-2018-mathematics-test-materials>
- Paper 2- Reasoning

- <https://www.youtube.com/watch?v=dzVyBQ5uTbo&safe=true>