Year 2 Maths Workshop

We will aspire through our Christian beliefs and attitudes for all children in our care to flourish both academically and personally; develop respect for others and to reach out to their local and global communities, so, 'hand in hand together with faith we will strive to achieve all things...

'I am able to do all things through him (Jesus) who strengthens me.'

Philippians 4:13

Aims of the session:

- Share the content of the Year 2 curriculum.
- Help you to understand Year 2 expectations in mathematics and the end of year assessments for maths.
- Look at SATs Papers.
- Home learning.

As mathematics is important and integral for everyday life we endeavour to ensure that children develop a healthy and enthusiastic attitude towards mathematics that will stay with them.

Our aims for mathematics at Bilston Church of England Primary School are for pupils to:

- become fluent in the fundamentals of mathematics and develop conceptual understanding as well as the ability to recall and apply knowledge rapidly and accurately

-be able to solve problems and reason mathematically

-use mathematical language

-be able to use and apply their mathematical knowledge, skills and understanding to science, other subjects and real life contexts.

End of year expectations – Year 2 – Maths

Number and Place Value	Addition and Subtraction	Multiplication and Division	Fractions including decimals and percentages
Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward. Recognise the place value of each digit in a two-digit number (tens, ones). Identify, represent and estimate numbers using different representations, including the number line. Compare and order numbers from 0 up to 100; use more and less than' signs, and = signs. Read and write numbers to at least 100 in numerals and in words. Use place value and number facts to solve problems.	*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 ones; a two-digit number and tens; two two-digit numbers; adding three one-digit numbers. Show that addition of two numbers can be done in any order (commutative) and subtraction of one 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.	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 (×), division (÷) and equals (=) signs. Show that multiplication of two numbers can be done in any order (commutative) and division of one 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.	Recognise, find, name and write fractions 1/3, 1/4, 2/4, and 3/4 of a length, shape, and set of objects or quantity. Write simple fractions for example, ½ of 6 = 3 and recognise the equivalence of 2/4 and ½.

End of year expectations – Year 2 – Maths

Measurement	Geometry: properties of shapes	Statistics
Choose and use appropriate standard units to estimate and measure to the nearest appropriate unit using rulers, scales, thermometers and measuring vessels: length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml). 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 order lengths, mass, volume/capacity and record the results using more or less than sign 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.	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. Compare and sort common 2-D and 3-D shapes and everyday objects. Geometry: Position and Direction Order and arrange combinations of mathematical objects in patterns and sequences. Use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise).	Interpret and construct simple pictograms, tally charts, block diagrams and simple tables. Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity. Ask and answer questions about totalling and comparing categorical data.

Addition in Year 2

27 + 30

+10 +10 +10

27 37 47 57

16 + 7

+4 +3

16 20 23

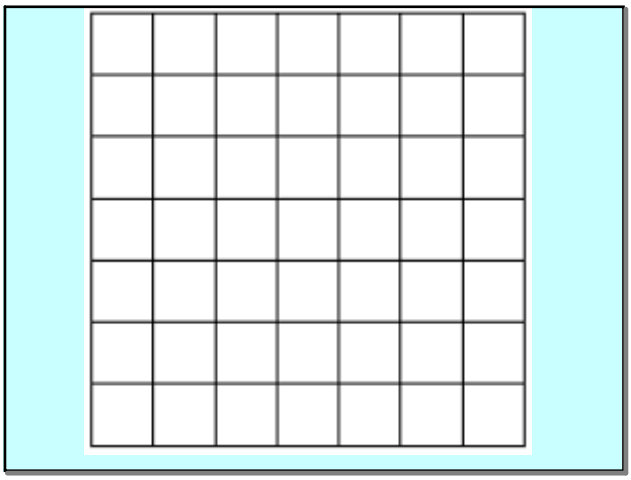
63 + 16

+10 +6

63 73 79

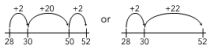
leading to Expanded written method

38
+ 25
13
50
63



Subtraction in Year 2

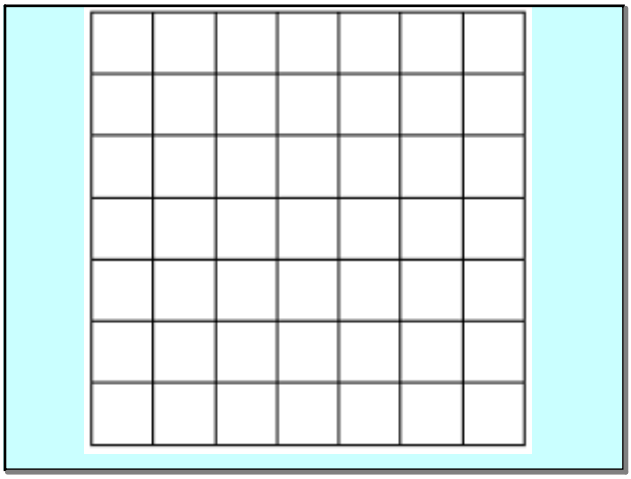
- empty number line ('difference' – counting up)



Leading to

– Subtract two two-digit numbers (without borrowing)
Record subtraction calculations without borrowing in columns to support place value and prepare for formal written methods with larger numbers.

87
– 32
55

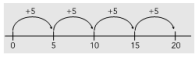


Multiplication in year 2

• Use model and images, e.g.

- concrete objects / pictorial representations

number



- arrays

5 x 4 = 20
4 x 5 = 20
• Calculate mathematical statements for multiplication within the multiplication tables and write them using the multiplication (x) and equals (=) signs

Division in Year 2

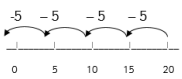
• Use model and images, e.g.

arrays

- concrete objects / pictorial representations

20 ÷ 5 = 4
20 ÷ 4 = 5

- number lines



Recognise and use the inverse relationship between multiplication and division, including doubling and halving

Calculate mathematical statements for multiplication within the multiplication tables and write them using the division (÷) and equals (=) signs

3 Strands

Varied Fluency

Reasoning

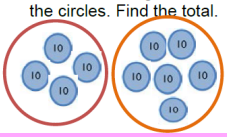
Problem Solving

Varied Fluency

6 + 4 = 10

60 + 40 =

- Add the tens together in the circles. Find the total.



Reasoning

Continue the pattern
90 = 100 – 10
80 = 100 – 20

What does it involve?

- Thinking behind mathematics
- Making connections / Looking for patterns
- Application of facts and knowledge
- Ability to convince yourself and others
- Justifying

Here are Class 2's crayons.

They are given a new box of 10 each day for a week.

How many crayons do they have at the end of the week?

Sam says 'If I know 9 + 1= 10, I also know what I add to 90 to make 100.' Is he right? Prove it.

Problem Solving

Jenny has ten 10p's. How many ways can she add them together to make £1.
Eg 20p + 80p

Can you find the missing number so each row and column adds up to 100?

20		50
30	40	

Application through word problems, both 2 and 3-step

- money
- the number system and place value
- applying number facts from arithmetic
- fractions
-Shape, Space and Measure

Arithmetic Paper

1 2 + 7 = ☐

1 mark

Arithmetic Paper

7 $\frac{1}{2}$ of 6 = ☐

1 mark

Arithmetic Paper

13 ☐ + 8 = 20

1 mark

Arithmetic Paper

14 54 + 22 = ☐

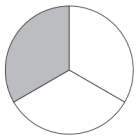
1 mark

Arithmetic Paper

23 98 – ☐ = 28

1 mark

Reasoning Paper



$\frac{1}{2}$ ☐ $\frac{1}{4}$ ☐

$\frac{1}{3}$ ☐ $\frac{3}{4}$ ☐

Reasoning Paper

Kemi goes to four clubs each week.

Which club lasts the **longest**?

Circle it.

Swimming 45 minutes	**Art** 2 hours
Music 75 minutes	**Drama** 1 hour

Reasoning Paper

Ajay's plant was **11** centimetres tall.

It grows **7** centimetres taller.

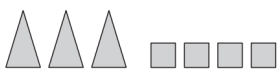
How tall is the plant now?

☐ cm

Reasoning Paper

Amy makes **25** using different shapes for tens and ones.

Amy makes a new number.



Reasoning Paper

Ajay has **20p** in 2p coins.

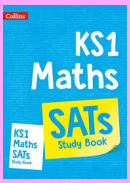
How many 2p coins does Ajay have?

coins

Home Learning

purple mash

Times Tables Rock Stars



Any Questions?