Maths Learning Organiser
Year 2

Yearly Progression:

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Number: Place Value (within 100) Number: Addition and Subtraction (within 100)	Number: Addition and Subtraction (within 100) Geometry: Shape	Measurement: Money Multiplication & Division	Multiplication & Division Measurement: Length and Height Measurement: Mass, capacity, and Temperature	Number: Fractions Measurement: Time SATS Practise	Statistics Geometry: Position & Direction Consolidate Yearly Learning

Home Learning

To find out home to access the Home Learning section from, please watch our YouTube video link.

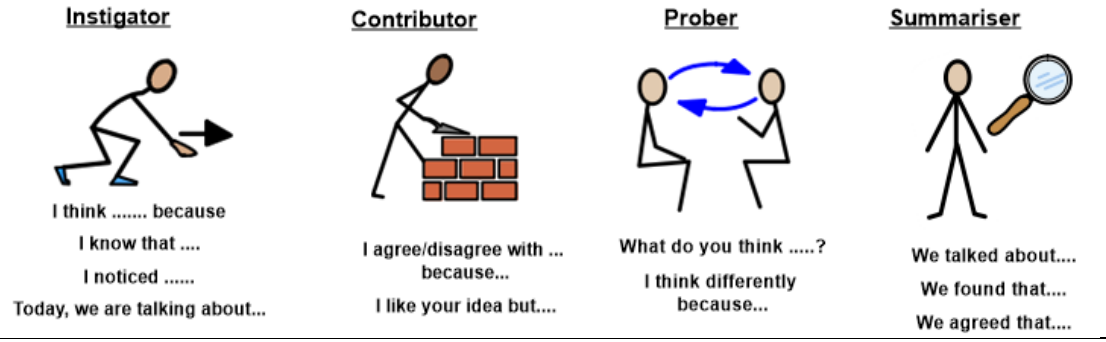
Home learning lessons follow the White Rose, Lesson by Lesson Progression like in school. Please click below to see,
https://whiterosemaths.com/resources/primary-resources/primary-sols/

For weekly home learning please click the link below, and then chose the correct unit of work for the term.
https://whiterosemaths.com/homelearning/year-2/

Links to wider curriculum:

- History- ordering dates on timelines- time intervals, days, months & years
- Geography – reading and interpreting data.
- Science- measuring and comparing, working scientifically.
- Computing
- Design and technology- Measuring, cooking, chopping into equal parts, shape and measure.

Number Talk Key Skills



Facts for free- making links between number facts and number bonds.
Draw on simple conclusions from understanding of work.
Predict what might come next.
Use manipulatives and images to explain and give reasons.
Justify using work examples.

Number: Addition and Subtraction

National Curriculum Objectives

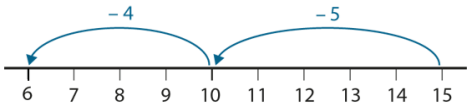
Solve problems with addition and subtraction:

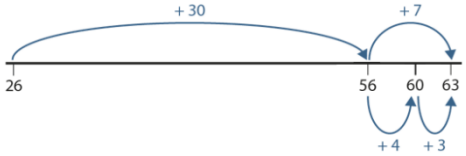
- Using concrete objects and pictorial representations, including those involving numbers, quantities and measures
- Applying their increasing knowledge of mental and written methods
- Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100
- Add and subtract 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.

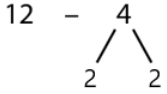
Teaching Spine

- Addition and subtraction: bridging 10
- Subtraction as difference
- Addition of…
  Two-digit and single-digit numbers
  Two-digit numbers and multiples of ten
  Two-digit and two-digit numbers
- Subtraction:
  two-digit and two-digit numbers

Efficient Methods that we will use… (Please see calculation policy)



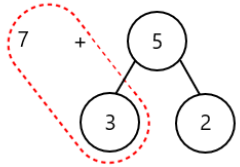




12 – 2 = 10

10 – 2 = 8

12 – 4 = 8



7 + 3 = 10

10 + 2 = 12

Examples of Greater Depth

'Fill in the missing squares, using the digits 0, 1, 2, 4, 5 and 6, so that each row and column adds up to the same number.'

3	3	3

I think of a number and I add 2. The answer is 17. What was my number?

I think of a number and I subtract 5. The answer is 24. What was my number?

Complete the calculations.

30 + 40 + □ = 100

40 + □ + 20 = 100

36 + 44 + □ = 100

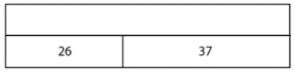
36 + 54 + □ = 100

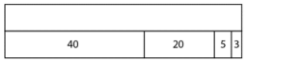
47 + □ + 20 = 100

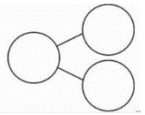
47 + □ + 30 = 100

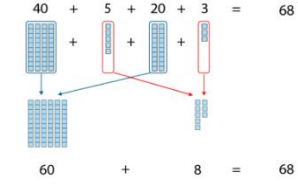
Important Images…

1000	2000	3000	4000	5000	6000	7000	8000	9000
100	200	300	400	500	600	700	800	900
10	20	30	40	50	60	70	80	90
1	2	3	4	5	6	7	8	9









Number: Multiplication & Division

National Curriculum Objectives

- 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.

Teaching Spine

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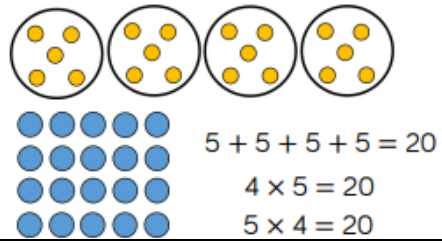
- Structures: multiplication representing equal groups
- Times tables: groups of 2 and commutativity (part 1)
- Times tables: groups of 10 and of 5, and factors of 0 and 1
- Commutativity (part 2), doubling and halving
- Structures: quotative and partitive division

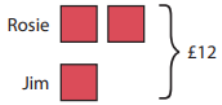
Efficient Methods that we will use… (Please see calculation policy)

Grouping
Sharing
Repeated Addition
Arrays
Number line



Examples of Greater Depth

Together Rosie and Jim have £12.
Rosie has twice as much as Jim.
How much does Jim have?
The bar model can be helpful in solving these types of problems.

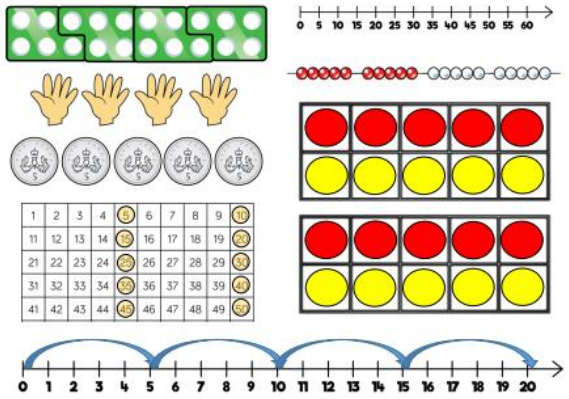


12 ÷ 3 = 4
Jim has £4

What do you notice?

Two friends want to buy some marbles and then share them out equally between them.
They could buy a bag of 13 marbles, a bag of 14 marbles or a bag of 19 marbles.
What size bag should they buy so that they can share them equally?

Important Images...



Number: Place Value

National Curriculum Objectives

- 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 <, > and = signs
- Read and write numbers to at least 100 in numerals and in words
- Use place value and number facts to solve problems

Teaching Spine

Refer to the addition stand (partitioning numbers in various ways)

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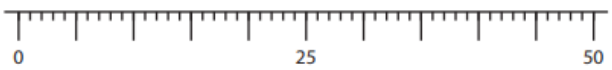
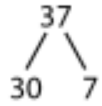
Efficient Methods that we will use…

10s	1s
4	2

Place these numbers on the number line:
10, 48, 30





Bar Modeling

In the number 47, there are ☐ groups of 10 and ☐ ones.
The number that is ten groups of 10 is ☐.
The number 75 shows ☐ in the tens place, and ☐ in the ones place.

Examples of Greater Depth

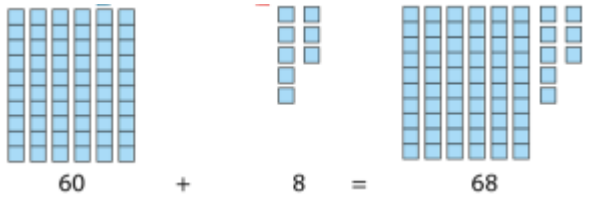
Write all the 2-digit numbers greater than 40 using these digits.

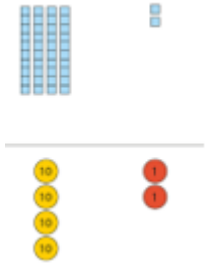
2 4 6 6

How do you know you have them all? Prove it.

Jo has £2·29.
She only has £1 coins, 10p coins and 1p coins.
How many of each coin does she have?
Can you suggest a different answer?

Important Images…





1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

1000	2000	3000	4000	5000	6000	7000	8000	9000
100	200	300	400	500	600	700	800	900
10	20	30	40	50	60	70	80	90
1	2	3	4	5	6	7	8	9

Number: Fractions

National Curriculum Objectives:

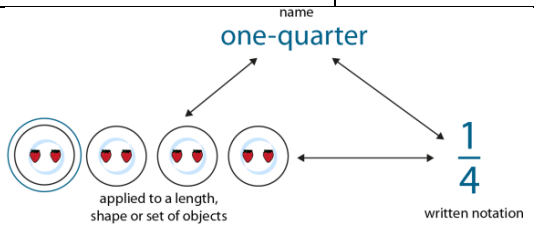
- Recognise, find, name and write fractions 1/3 , 1/4 , 2/4 and 3/4 of a length, shape, set of objects or quantity
- Write simple fractions for example, 1/2 of 6 = 3 and recognise the equivalence of 2/4 and 1/2 .

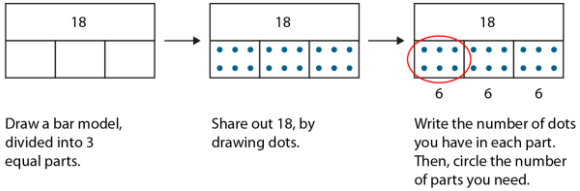
Teaching Spine:

NCETM NATIONAL CENTRE FOR EXCELLENCE IN THE TEACHING OF MATHEMATICS

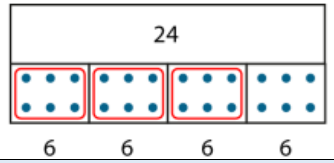
- **1**: Name the fractions 'one-half', 'one-quarter' and 'one-third' in relation to a fraction of a length, shape or set of objects.
- **2**: Read and write the fraction notation $\frac{1}{2}$, $\frac{1}{3}$ and $\frac{1}{4}$, and relate this to a fraction of a length, shape or set of objects.
- **3**: Find half of numbers.
- **4**: Find $\frac{1}{3}$ or $\frac{1}{4}$ of a number.
- **5**: Find $\frac{2}{4}$ and $\frac{3}{4}$ of an object, shape, set of objects, length or quantity; recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$.

Efficient Methods that we will use…

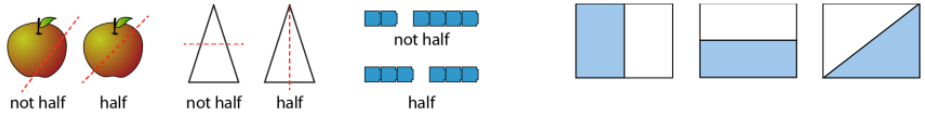




Examples of Greater Depth:



Important Images…



Precision Maths:

- Partition any 2-digit number into 10s and 1s
- Read and write numbers to at least 100 and more in numerals and words
- Identify 1 more, 1 less, 10 more, 10 less
- Recall and use addition and subtraction number facts to 20 fluently
- Counting in 2s, 3s, 5s, 10 and multiplication facts and division facts using symbols
- Recognising and representing halves, quarters, and thirds
- Using < > = to compare and order length
- Names and properties of 2D and 3D shapes
- Tell and write the time to the nearest 5 minutes.