SUTTON ROAD PRIMARY SCHOOL AND NURSERY

Holgate Primary and Nursery School

Personal Responsibility In Delivering Excellence

Maths Overview

F2 to Year 6

Contents page.

SUTTON ROAD PRIMARY SCHOOL AND NURSERY

Holgate Primary and Nursery School

Maths vision statement.

At Sutton Road Primary school and Holgate Primary School, we believe that mathematics is an important life skill.

Our Maths overviews enable our children to gain the necessary understanding, skills and knowledge that will empower them to gain the confidence and enjoyment of mathematics.

We believe that mathematics:

- must prioritise fluency so all children can access and develop concepts,
- make links to and across the curriculum and deepen understanding.
- embolden children to become problem-solvers.
- should provide children with opportunities to reason and think logically.

In order to instill all of these in each Maths lesson taught, we have an ‘Reactivate, model, practice and independent’ approach to 4 weekly maths lessons. The Reactivate is designed to recap on key maths skills required for the main learning intention. The model section of the Maths lesson is where the teaching demonstrates several examples of the teaching being taught which can include manipulatives and visual representations. The Practice section of the lesson enables children to work alongside the teacher to practice the skills required for the independent task. During the independent part of the lesson children apply the skills they have practiced independently to achieve the learning intention. Adaptations are provided for individuals so that they can achieve the intended learning intention. This could include place value grids, use of manipulatives or templates for working out.

Maths lesson format.

As a collaboration we have agreed on a Maths lesson format for years 1 – 6.

The agreed Maths lesson format:

- Reactivate
- Model
- Practice
- Independent

Arithmetic Practice.

As a collaboration we have agreed on arithmetic tests being taught fortnightly. These are to take place at the end of the week during Maths lesson time.

Within that lesson children need to complete the test and mark it with you as a class. Your main role during this is to go through questions children are unsure of and sharing efficient strategies – ideally on the whiteboard or flipchart paper.

These scores are to be recorded to give you information on progress over a period of time.

Useful links:
Arithmetic tests
WAGOLL of recording weekly arithmetic scores.

Number Sense

As a collaboration we have agreed on a Number Sense sessions being taught fortnightly. These are taught on alternate weeks with the arithmetic paper. These are to take place at the end of the week during Maths lesson time.

Within this session, children will look at the place value of number in greater detail, improving their fluency skills which provide the necessary building blocks of the deeper understanding we desire all children to achieve.

[Resources to support]

Superhero times table test.

As a collaboration we have agreed on a weekly Superhero Times Table test.

The tests are progressive and timed. Each test follows a similar format that includes recall questions, division facts and worded problems.

Every half-term Maths leads will ask each Class Teacher for an update on where each individual child is so we can track progress and prepare children for the Year 4 Multiplication test.

Useful links:

Superhero Times Table Test resources.

Superhero Times Table tracker

Resources for planning.

We encourage you to use a wide range of resources for your planning or to take inspiration from resources that already exist such as the White Rose premium resources.

Allow children the opportunity to use Maths equipment during lessons such as Numicon, dienes and shapes. Each school has a specific Maths cupboard where resources are kept. If you notice something is missing or is needed, please let the Maths lead know ASAP.

Useful links:
Resources to support planning

Marking Symbols

These are marking symbols that are to be used across the school within the subject of Maths.

General

VF	S	I	
Verbal Feedback	Supported	Independent	
Verbal feedback given to support teaching and learning.	Support given to achieve an objective and aid teaching and learning.	Independent work achieved in meeting a learning objective.	

Maths Stem Sentences

All children need to have the opportunity to answer questions using written explanations as this supports their understanding and progression within Maths.

Here are some generic open-ended questions but within this document we have specified certain questions that can be used for the different areas of the Maths curriculum for each year group.

These questions can be displayed on the IWB , included in the anchor task or included in the chili challenges.

Open-ended sentence stems

- I noticed that …
- I decided to … because…
- First I tried …
- I already know that …
- so …
- When I looked at …
- I noticed that …
- This didn't work, so …
- I know this is true because ...
- This reminds me of …
- I noticed a connection between …
- I wondered why …
- I have used the …..method because …..

Foundation 2 – Number (place value/numerical patterns)

	F2	Year 1
Number bonds		Represent and use number bonds and related subtraction facts within 20
Mental calculations	Count objects, actions and sounds. Count beyond ten. Subitise. Link the number symbol (numeral) with its cardinal number value. Link the number symbol (numeral) with its cardinal number value. Compare numbers. Understand the 'one more than/one less than' relationship between consecutive numbers. Explore the composition of numbers to 10. Verbally count beyond 20, recognising the pattern of the counting system. Subitise (recognising quantities without counting) up to 5. Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity. Have a deep understanding of numbers to 10, including the composition of each number.	Add and subtract onedigit and two-digit numbers to 20, including zero 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 add and subtract numbers mentally, including: * a three-digit number and ones * a three-digit number and tens * a three-digit number and hundreds
Written calculations		Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs (appears also in Mental Calculation)

Foundation 2 – Mathematics (place value/numerical patterns)

F2	Year 1 Vocabulary
Subitise Order One more/one less Bigger/smaller Less/more Same/different Repeat Unit Numbers past 10 are '10 and a bit (e.g. 12 is made of a full 10 and 2)	less/ fewer – less is something that you cannot count, fewer is something you can count. whole/ not whole part group altogether partition Children should be able to say ' x represents y' One more/ one less half way between double even number

Maths STEM sentences: (verbalised)

- Which has more/less?
- Which has most/least?
- Which is biggest/smallest?
- 12 is made up of 10 and 2 ones, 13 is made up of 10 and 3 ones.

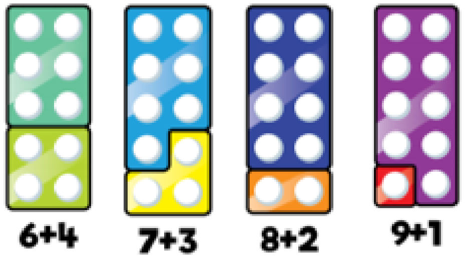
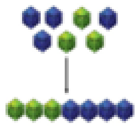
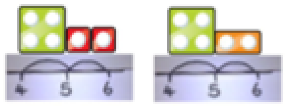
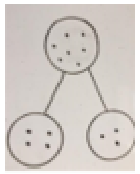
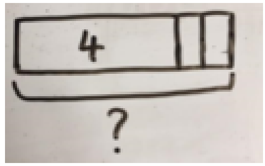
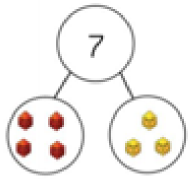
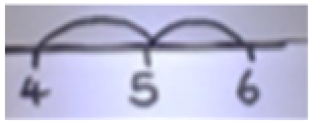
SUTTON ROAD PRIMARY SCHOOL AND NURSERY

Foundation 2 – Mathematics Addition.

Holgate Primary and Nursery School

	F2	Year 1
Number bonds	Automatically recall number bonds for numbers 0-10. Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts.	Represent and use number bonds and related subtraction facts within 20
Mental calculations	Count objects, actions and sounds. Count beyond ten. Subitise. Link the number symbol (numeral) with its cardinal number value. Link the number symbol (numeral) with its cardinal number value. Compare numbers. Understand the 'one more than/one less than' relationship between consecutive numbers. Explore the composition of numbers to 10. Verbally count beyond 20, recognising the pattern of the counting system. Subitise (recognising quantities without counting) up to 5. Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity. Have a deep understanding of numbers to 10, including the composition of each number.	Add and subtract one digit and two-digit numbers to 20, including zero 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 add and subtract numbers mentally, including: * a three-digit number and ones * a three-digit number and tens * a three-digit number and hundreds
Written calculations	Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed evenly.	Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs (appears also in Mental Calculation)

EYFS Addition

	Mental Strategies	Concrete	Pictorial	Abstract	Vocabulary	Models, Images and resources
EYFS	If available, Numicon shapes are introduced straight away and can be used to : Identify 1 more/less Combine pieces to add Find number bonds Add without counting Subitise/recognise patterns to support addition for example arrange objects as you would see them on a dice. Adding with a tens frame for example we know if a tens frame is full this is 10, one line equals 5, one less than a line equals 4 etc.	 Combining two parts to make a whole (use other resources too e.g. eggs, shells, teddy bears, cars).  Counting on using number lines using cubes or Numicon.  	Children to represent the cubes using dots or crosses. They could put each part on a part whole model too.  A bar model which encourages the children to count on, rather than count all.   Children can use bead strings practically or colouring in different sums. For example: 4 + 3 = 7	4 + 3 = 7 Four is a part, 3 is a part and the whole is seven.  7 = 4 + 3 7 = 3 + 4 The abstract number line: What is 2 more than 4? What is the sum of 2 and 4? What is the total of 4 and 2? 4 + 2 	Tens Ones Units Add More And Make Sum Total Altogether Double One more two more ten more Add five more. How many more to make ….? How many more is … than …?	100 square Number lines Number tracks Bead strings Tens Frame Numicon Place Value Counters Base ten (Dienes)

Foundation 2 – Mathematics Addition

F2	Year 1 Vocabulary
Add Combine Total together Altogether Group Whole/not whole Part One more double Equals More	less/ fewer – less is something that you cannot count, fewer is something you can count. whole/ not whole Children should be able to say ‘ x represents y’ half way between even number

Maths STEM sentences: (verbalised not written)

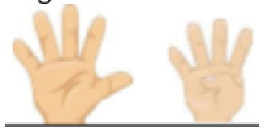
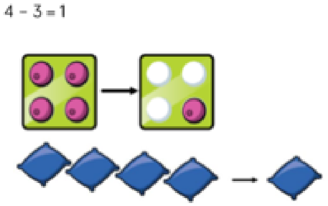
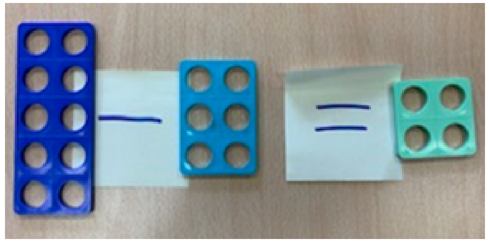
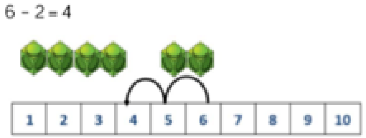
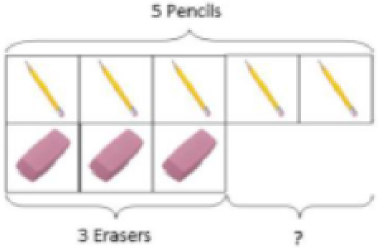
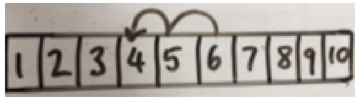
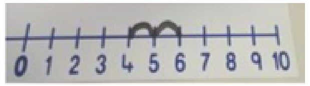
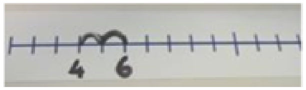
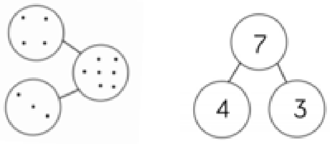
- X on this hand and y on this hand and this makes z altogether.
- ___ + ____ = ____

Foundation 2 – Mathematics Subtraction

	F2	Year 1
Number bonds	Automatically recall number bonds for numbers 0-10. Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts.	Represent and use number bonds and related subtraction facts within 20
Mental calculations	Count objects, actions and sounds. Count beyond ten. Subitise. Link the number symbol (numeral) with its cardinal number value. Link the number symbol (numeral) with its cardinal number value. Compare numbers. Understand the 'one more than/one less than' relationship between consecutive numbers. Explore the composition of numbers to 10. Verbally count beyond 20, recognising the pattern of the counting system. Subitise (recognising quantities without counting) up to 5. Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity. Have a deep understanding of numbers to 10, including the composition of each number.	Add and subtract onedigit and two-digit numbers to 20, including zero 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 add and subtract numbers mentally, including: * a three-digit number and ones * a three-digit number and tens * a three-digit number and hundreds
Written calculations	Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed evenly.	Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs (appears also in Mental Calculation)

Primary Calculation Policy

EYFS Subtraction

	Mental Strategies	Concrete	Pictorial	Abstract	Vocabulary	Models, Images and resources
EYFS	Children are encouraged to read number sentences aloud in different ways “five take away one leaves four” “four is equal to five take away one” Children make a record in pictures, words or symbols of subtraction activities carried out. Solve simple problems using fingers 	Physically taking away and removing objects from a whole   Finding the difference (using cubes, Numicon or Cuisenaire rods, other objects can also be used).	Counting back (using number lines or number tracks) children start with 6 and count back 2.  Children to draw the concrete resources they are using and cross out the correct amount. The bar model can also be used. **4 – 3 = 1**  Children to represent what they see pictorially e.g. **6 – 2 = 4**  Children to draw the cubes/other concrete objects which they have used or use the bar model to illustrate what they need to calculate.	Children to represent the calculation on a number line or number track and show their jumps. Encourage children to use an empty number line    7 – 3 = 4 7 – 4 = 3	Take (away) Leave How many are left/left over? How many have gone? One less, two less … ten less… How many fewer is … than Difference between Is the same as	100 square Number lines Number tracks Bead strings Tens Frame Numicon Place Value Counters Base ten

Foundation 2 – Mathematics Subtraction.

F2	Year 1 Vocabulary
Less/fewer One less Part/part whole Take away Subtract Minus Smaller	less/ fewer – less is something that you cannot count, fewer is something you can count. whole/ not whole part partition Children should be able to say ‘ x represents y’ half way between even number

Maths STEM sentences (verbalised not written)

- How many do you have left?
- What number comes before _____?

Foundation 2 – Mathematics Multiplication

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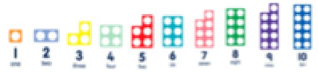
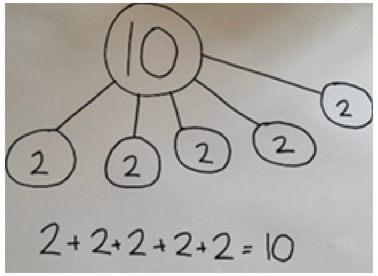
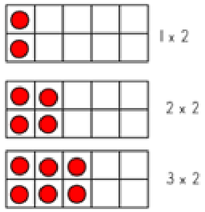
	F2	Year 1
Times Tables		Count in multiples of twos, fives and tens (copied from Number and Place Value) count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backward (copied from Number and Place Value) count from 0 in multiples of 4, 8, 50 and 100 (copied from Number and Place Value)
Mental calculations		Making links If one teddy has two apples, how many apples will three teddies have? Here are 10 lego people If 2 people fit into the train carriage, how many carriages do we need?
Written calculations		Practical If we put two pencils in each pencil pot how many pencils will we need?

Primary Calculation Policy

EYFS Multiplication

	Mental Strategies	Concrete	Pictorial	Abstract	Vocabulary	Models, Images and resources
EYFS	The link between addition and multiplication should be introduced though doubling. Count in twos; fives; tens both aloud and with objects. I have two tens frame so that means I have 20 etc.	**Repeated grouping/repeated addition**  If available, Numicon is used to visualise the repeated adding of the same number. These can then be drawn around or printed as a way of recording.  Real life contexts and use of practical equipment to count in repeated groups of the same size: How many wheels are there altogether? 	**Children to draw the concrete resources they are using.**   	**Write the number sentence** $2 + 2 + 2 = 6$	Lots of Groups of Repeated addition Double	100 square Number lines Number tracks Bead strings Bead bar Tens Frame Numicon Place Value Counters Cuisenaire Base ten (Diennes).

Foundation 2 – Mathematics Multiplication.

F2	Year 1 Vocabulary
Groups of Lots of Repeat Repeated addition	'One group of ten, two groups of ten,' Group Groups Double Half

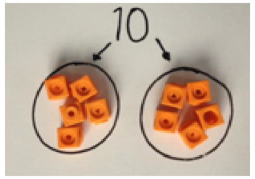
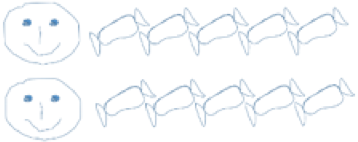
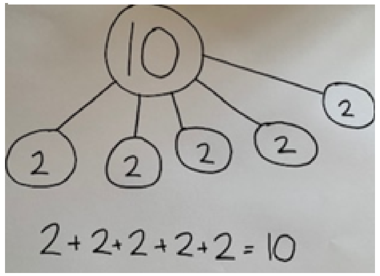
Maths STEM sentences: verbalised

- How many groups/lots of do we have?
- How many would you have if you had ____ groups of ____?

Foundation 2 – Division.

	F2	Year 1
Times Tables		Count in multiples of twos, fives and tens (copied from Number and Place Value) count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backward (copied from Number and Place Value) count from 0 in multiples of 4, 8, 50 and 100 (copied from Number and Place Value)
Mental calculations		Making links If one teddy has two apples, how many apples will three teddies have? Here are 10 lego people If 2 people fit into the train carriage, how many carriages do we need?
Written calculations		Practical If we put two pencils in each pencil pot how many pencils will we need?

EYFS Division

	Mental Strategies	Concrete	Pictorial	Abstract	Vocabulary	Models, Images and resources
EYFS	Count in twos; fives; tens both aloud and with objects.	**Grouping or Sharing Model**   I have 10 cubes, can you share them equally in 2 groups?	**Grouping or Sharing Model** Children to draw the concrete resources they are using. **6 ÷ 3 = 2**  **10 ÷ 2 = 5**   	**Grouping or Sharing Model** Write the number sentence $\boxed{6}$ socks make $\boxed{3}$ groups of $\boxed{2}$ $\boxed{10}$ sweets shared between $\boxed{2}$ equals $\boxed{5}$ sweets each	Share Sharing grouping Equal Groups Left over Half Halving	100 square Number lines Number tracks Bead strings Tens Frame Numicon Place Value Counters Base ten (Dienes)

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Foundation 2 – Mathematics Division

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F2	Year 1 Vocabulary
Share Fair Equal Same Different Half (objects)	'One group of ten, two groups of ten,' Group Groups Half (numerical)

Maths STEM sentences: verbalised

- One for me, one for you
- Is it fair?
- Have we got the same/different?

Foundation 2 – Mathematics Shape

F2	Year 1 Vocabulary
Circle Triangle Square Rectangle shape Sides/side Same/different Long Short Equal The same Corners/points Straight Curved round Flat 2d 3d Solid Not flat Cube	Cuboid Cylinder Pyramid Sphere

- **Maths STEM sentences (verbalised not written:**

- Does it roll?
- My shape has got _____ equal sides. What shape could it be?
- Is it still a triangle if I turn it round?
- Which shape is the odd one out?

EYFS framework
Mathematics in EYFS information.

Foundation 2 – Mathematics Position and direction

F2	Year 1 Vocabulary
Turn Next to Behind On Under Over In front of Behind In between In the middle Inside In/out Up and down	Clockwise Anti-clockwise

- **Maths STEM sentences:**
- The rabbit is _______ the table

[EYFS framework]
[Mathematics in EYFS information.]

Foundation 2 – Mathematics Measurement.

SUTTON ROAD PRIMARY SCHOOL AND NURSERY

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F2 vocabulary	Year 1 Vocabulary
bigger/smaller heavier/ lighter taller/ shorter older/ younger longer/ shorter more / fewer Equal Balance Weigh Measure Full Half full Empty Wide Narrow Thin Order Short/shorter/shortest Long/longer/longest Further/furthest taller/tallest	greater / more than less / fewer than equal to the same length as the same weight as bigger/biggest smaller/ smallest estimate

Maths STEM sentences:

- Can you make a long/short/thick/thin snake?
- How many blocks long is your snake?
- Can you find something longer/short/thinner/thicker than ________?
- How could you measure _________?

EYFS framework
Mathematics in EYFS information.

Foundation 2 – Mathematics Measurement (Time).

F2 vocabulary	Year 1 Vocabulary
Today Tomorrow Yesterday Soon/sooner Before Now Next After Later Fast/faster/fastest slow/slower/slowest	Clockwise Anti-clockwise Hours Minutes Seconds O'clock Half-past Morning/afternoon/evening Days of the week/Months in the year.

Maths STEM sentences:

- What day comes after ______?
- How fast can you ________
- What comes before/after _______?

[EYFS framework]

[Mathematics in EYFS information.]

Year 1 – Place value.

F2	Year 1 Vocabulary
Subitise Order One more/one less Bigger/smaller Less/more Same/different Repeat Unit Numbers past 10 are '10 and a bit (e.g. 12 is made of a full 10 and 2)	less/ fewer – less is something that you cannot count, fewer is something you can count. whole/ not whole part group altogether partition Children should be able to say ‘ x represents y’ One more/ one less half way between double even number

Maths STEM sentences:

- There are ____ tens and ____ ones. The number is ___.
- ____ = _____ + _____
- 42 is ______ than 46 (more than, less than or equal to)
- 30 + 8 is _____ thirty eight (more than, less than or equal to)
- ____ is greater than/less than/</>/= _____
- I know that _____ is ten more than ____. The ____ column changes.
- I know ____ (digits) can also be written as ____ (words).
- A is __________ because it is one more than the midpoint of _________.
- C is ______ because it is one less than _____________.

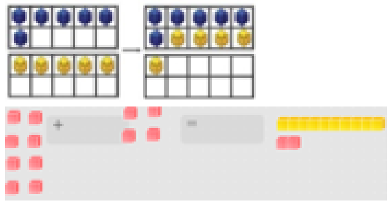
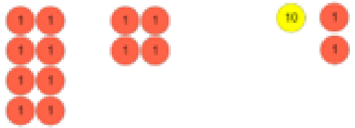
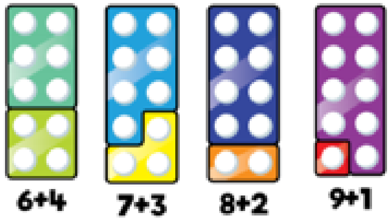
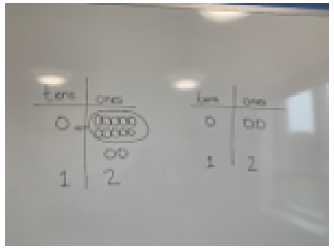
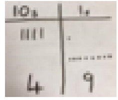
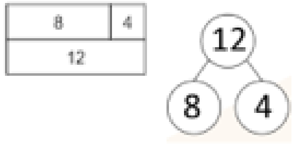
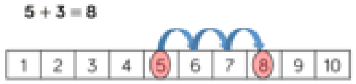
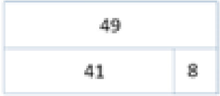
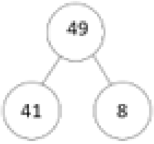
Year 1 – Addition

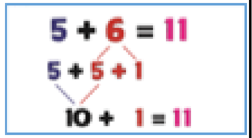
	F2	Year 1
Number bonds	Automatically recall number bonds for numbers 0-10. Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts.	Represent and use number bonds and related subtraction facts within 20
Mental calculations	Count objects, actions and sounds. Count beyond ten. Subitise. Link the number symbol (numeral) with its cardinal number value. Link the number symbol (numeral) with its cardinal number value. Compare numbers. Understand the 'one more than/one less than' relationship between consecutive numbers. Explore the composition of numbers to 10. Verbally count beyond 20, recognising the pattern of the counting system. Subitise (recognising quantities without counting) up to 5. Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity. Have a deep understanding of numbers to 10, including the composition of each number.	Add and subtract onedigit and two-digit numbers to 20, including zero 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 add and subtract numbers mentally, including: * a three-digit number and ones * a three-digit number and tens * a three-digit number and hundreds
Written calculations	Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed evenly.	Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs (appears also in Mental Calculation)

[Previous, current and future learning linked to addition.]

Y3

Year One Addition

	Mental Strategies	Concrete	Pictorial	Abstract	Vocabulary	Models, Images and resources
Year 1	Use counting sticks, counting on, fingers or songs to add together 2 small amounts mentally. Add a pair of single-digit numbers, including crossing 10, e.g. 5 + 8 Add one-digit number to a teens number, e.g. 13 + 5 Add one-digit to 10, and a multiple of 10 to a one-digit number, e.g. 10 + 7, 7 + 30 Add one-digit and two-digit numbers to 20 (9 + 9, 18 - 9), including zero Add doubles and near doubles, e.g. 6 + 7	**Regrouping to make 10** using ten frames and counters/cubes or using Numicon. 6 + 5   **Number bonds to 10 using Numicon** 	**Regrouping to make 10** Children to draw the ten frame and counters/cubes. Also draw counters in place value frames.  **2-digit + 1-digit not crossing 10s** Children to represent the base 10 e.g. lines for tens and dot/crosses for ones. e.g. 41 + 8 = 49 	**Regrouping to make 10** Children to develop an understanding of equality: Use a bar model   6 + □ = 11 6 + 5 = 5 + □ 6 + 5 = □ + 4 **2-digit + 1-digit not crossing 10s** Use a part whole model 41+8 = 49  	Add Total More Tens Ones Units Digit	100 square Number lines Number tracks Bead strings Tens Frame Numicon Place Value Counters Base ten (Dienes)



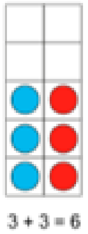
Represent and use number bonds to 20

2-digit + 1-digit not crossing 10s

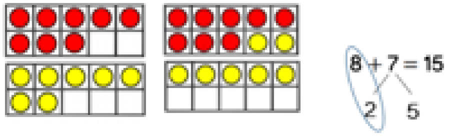
Using base 10 or place value counters. Continue to develop understanding of partitioning and place value. 41 + 8

1 digit + 1 digit crossing 10s

Adding doubles.



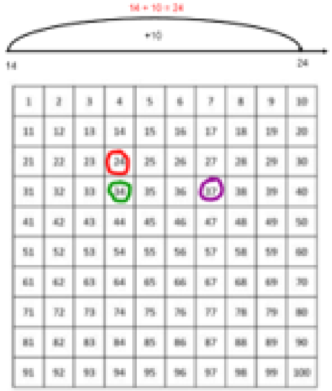
1 digit + 1 digit crossing 10s



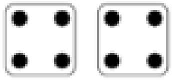
2-digit + 10

24 + 10 = 34

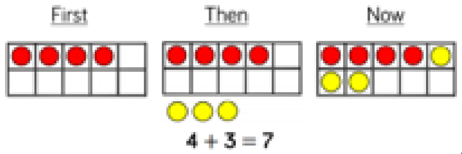
Using a hundred square or number line to add a multiple of ten.



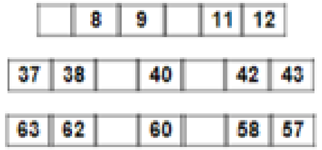
Adding doubles.

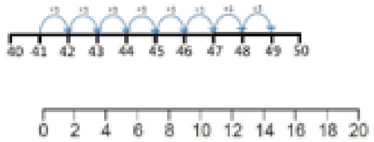


Using the vocabulary first, then and now:



Counting forwards and backwards in 1s and multiples of 2, 5 and 10





Year 1 – Addition.

F2	Year 1 Vocabulary
Add Combine Total together Altogether Group Whole/not whole Part One more double Equals More	less/ fewer – less is something that you cannot count, fewer is something you can count. whole/ not whole Children should be able to say ‘ x represents y’ half way between even number

<u>Maths STEM sentences:</u>

- There are ____ tens and ____ ones. The number is ___.
- ____ = _____ + _____
- 42 is ______ than 46 (more than, less than or equal to)
- 30 + 8 is _____ thirty eight (more than, less than or equal to)
- ____ is greater than/less than/</>/= _____
- I know that _____ is ten more than ____. The ____ column changes.
- I know ____ (digits) can also be written as ____ (words).
- A is __________ because it is one more than the midpoint of _________.
- C is ______ because it is one less than _____________.

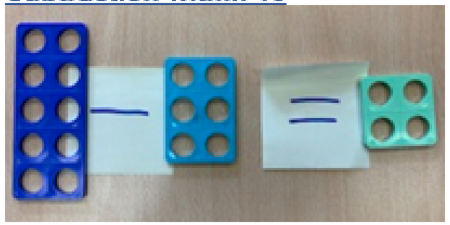
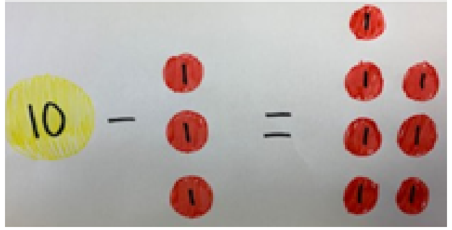
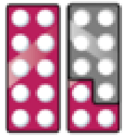
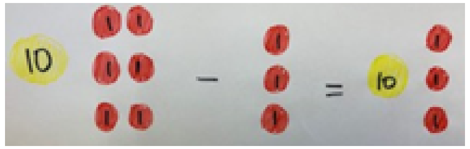
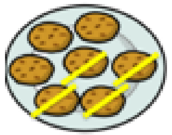
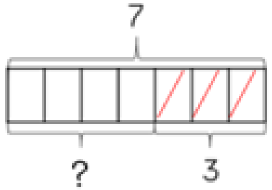
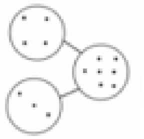
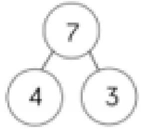
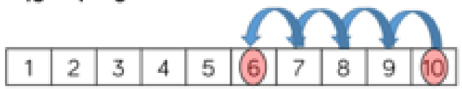
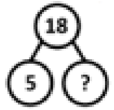
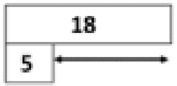
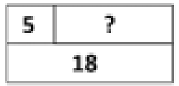
Year 1 – Subtraction

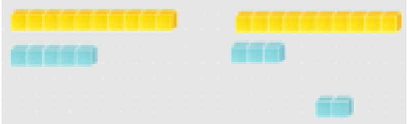
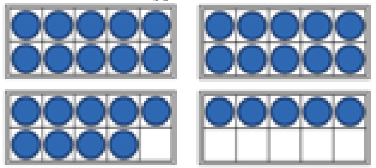
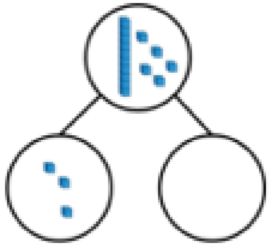
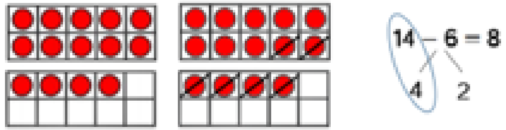
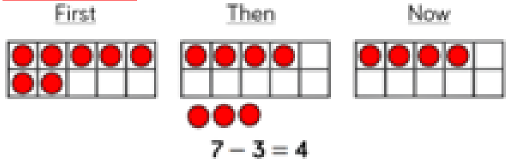
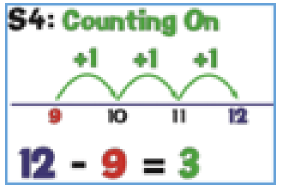
	F2	Year 1
Number bonds	Automatically recall number bonds for numbers 0-10. Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts.	Represent and use number bonds and related subtraction facts within 20
Mental calculations	Count objects, actions and sounds. Count beyond ten. Subitise. Link the number symbol (numeral) with its cardinal number value. Link the number symbol (numeral) with its cardinal number value. Compare numbers. Understand the 'one more than/one less than' relationship between consecutive numbers. Explore the composition of numbers to 10. Verbally count beyond 20, recognising the pattern of the counting system. Subitise (recognising quantities without counting) up to 5. Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity. Have a deep understanding of numbers to 10, including the composition of each number.	Add and subtract one digit and two-digit numbers to 20, including zero 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 add and subtract numbers mentally, including: * a three-digit number and ones * a three-digit number and tens * a three-digit number and hundreds
Written calculations	Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed evenly.	Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs (appears also in Mental Calculation).

[Previous, current and future learning linked to subtraction.]

Y3

Year One Subtraction

	Mental Strategies	Concrete	Pictorial	Abstract	Vocabulary	Models, Images and resources
Year 1	Counting forwards, backwards and chanting. Using counting stick and songs. Subtract a pair of one-digit numbers e.g. 9 -5 – see EYFS Represent and use number bonds to 20	**Subtraction within 10**   **Subtracting not crossing ten** 20 – 7 using numicon   15 – 2 using base ten	**Subtraction within 10** Draw 7 cookies and cross out 4 Draw a first, then, now     **Subtracting not crossing 10** 15 – 3 	**Subtraction within 10**  7 – 2 = 5   7 – 3 = 4 7 – 4 = 3 10 – 4 = 6  **Subtracting not crossing 10** 18 -5 use a part whole model  18 – 5 – bar modelling   18 – 5 - number equation	As above Count back Count on Less than Difference Take away Subtract Part – whole First Then Now	100 square Number lines Number tracks Bead strings Tens Frame Numicon Place Value Counters Base ten (Diennes).

		 19 – 4 using tens frame  **Subtracting crossing 10** Making 10 using ten frames. 13 – 5  Can also use base ten, counters, numicon – as shown above	 **Subtracting crossing 10** Draw the jam tarts 13 – 5  Can also draw the counters and cross out – as above.  **Using the vocabulary first, then and now:**  	18 – 5 = 13 13 = 18 - 5 **Subtracting crossing 10** 12- 9 – number line count on  Bar models, number equations and part whole models as shown above.		

Year 1 – Subtraction.

F2	Year 1 Vocabulary
Less/fewer One less Part/part whole Take away Subtract Minus Smaller	less/ fewer – less is something that you cannot count, fewer is something you can count. whole/ not whole part partition Children should be able to say ' x represents y' half way between even number

Maths STEM sentences:

- There were ____ first, then I took away ____. Now there are ____.
- First there were ______. Then there were ______________. Now there are ___________.

SUTTON ROAD PRIMARY SCHOOL AND NURSERY

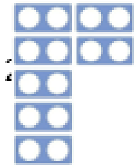
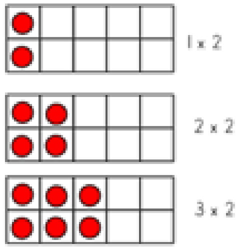
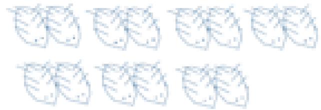
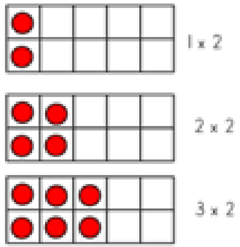
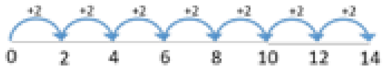
Year 1 – Multiplication

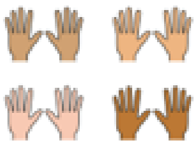
Holgate Primary and Nursery School

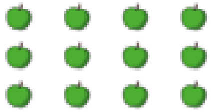
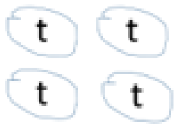
	F2	Year 1
Times Tables		Count in multiples of twos, fives and tens (copied from Number and Place Value) count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backward (copied from Number and Place Value) count from 0 in multiples of 4, 8, 50 and 100 (copied from Number and Place Value)
Mental calculations		Making links If one teddy has two apples, how many apples will three teddies have? Here are 10 lego people If 2 people fit into the train carriage, how many carriages do we need?
Written calculations		Practical If we put two pencils in each pencil pot how many pencils will we need?

Previous, current and future learning linked to multiplication.

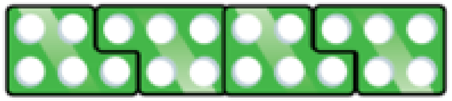
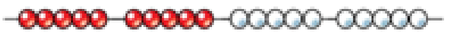
Year One Multiplication

	Mental Strategies	Concrete	Pictorial	Abstract	Vocabulary	Models, Images and resources
Year 1	Count on from and back to zero in ones, twos, fives or tens Make connections between arrays, number patterns, and counting in twos, fives and tens. Recognise odd and even numbers	**Repeated Addition – Counting in 2s (also apply to counting in 10's and 5's)** Use images of different objects   There are 7 groups of  Tens frames can also be used to show times tables such as 2s, 5s and 10s.	**Repeated Addition - – Counting in 2s** Draw the objects   There are 7 groups of 2  Tens frames can also be used to show times tables such as 2s, 5s and 10s.	**Repeated Addition - – Counting in 2s** Can use bar model, number line and equation   2 + 2 + 2 + 2 + 2 + 2 + 2 = 14 2 x 7 = 14 (introduce the multiplication symbol) Introduce the multiplication symbol 5 + 5 + 5 = 5 x 3 = 15 **Repeated addition – Counting in Tens**	Lots of Groups of Times Multiply Repeated addition Double Sets Groups, Pairs Array	100 square Number lines Number tracks Bead strings. Tens Frame Numicon Place Value Counters Base ten (Diennes).

<table>
<tr>
<td></td>
<td></td>
<td>
<u>Repeated addition – Counting in Tens</u>
Use images of different objects – including Numicon

4 groups of 10 (fingers and thumbs)


4 groups of 10 pens
18 – 5 using counters
<u>Repeated addition – Counting in Fives</u>
Please follow the guidance from counting in 2s and 10s – exactly the same principle
<u>Using arrays</u>
Explain the language of columns and rows. Use concrete apparatus.

</td>
<td>
<u>Repeated addition – Counting in Tens</u>
Draw the objects


4 groups of ten (t represents ten)


Try to avoid pupils drawing out ALL ten objects 4 times.
<u>Repeated addition – Counting in Fives</u>
Please follow the guidance from counting in 2s and 10s – exactly the same principle


</td>
<td>
As above
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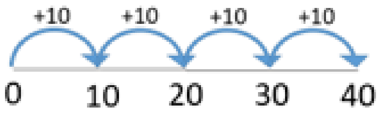
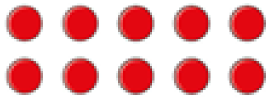
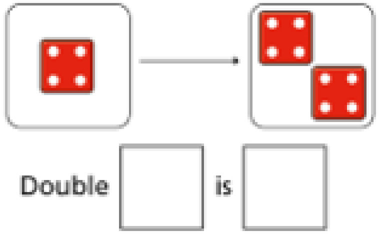
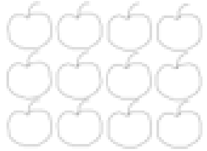
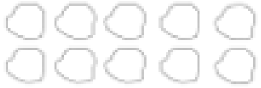
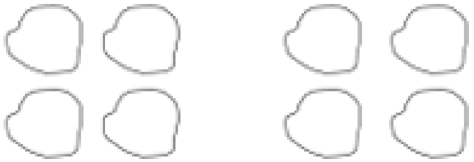
<tr><td>10</td><td>10</td><td>10</td><td>10</td></tr>
</table>


10 + 10 + 10 + 10 = 40
<u>Repeated addition – Counting in Fives</u>
Please follow the guidance from counting in 2s and 10s – exactly the same principle
<u>Doubling</u>
Use a bar model and equation
<table>
<tr><td colspan="2">8</td></tr>
<tr><td>4</td><td>4</td></tr>
</table>
</td>
<td></td>
<td></td>
</tr>
</table>

		There are 3 apples in each column. There are 4 columns. There are 12 apples altogether.  There are 5 counters in each row. There are 2 rows. There are 10 counters altogether. **Doubling** Use lots of different manipulatives to support doubling numbers 	**Using arrays** Explain the language of columns and rows. Children can draw the arrays  There are 3 apples in each column. There are 4 columns. There are 12 apples altogether.  There are 5 counters in each row. There are 2 rows. There are 10 counters altogether. **Doubling** Children can draw it 	$4 + \underline{4} = 8$		

Year 1 – Multiplication.

F2	Year 1 Vocabulary
Groups of Lots of Repeat Repeated addition	'One group of ten, two groups of ten,' Group Groups Double Half

Maths STEM sentences:

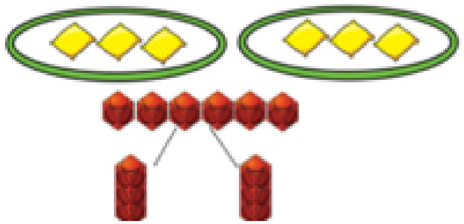
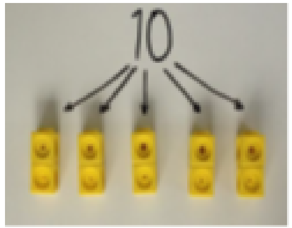
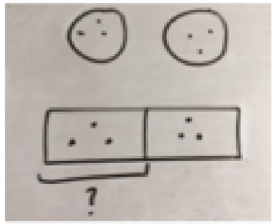
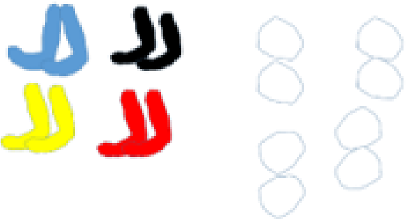
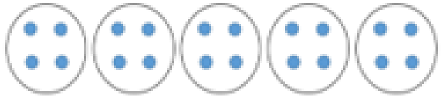
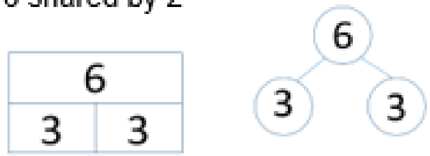
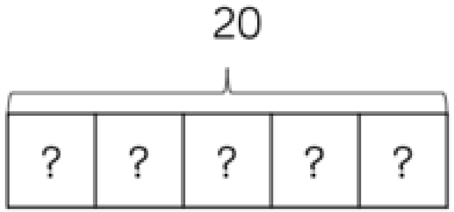
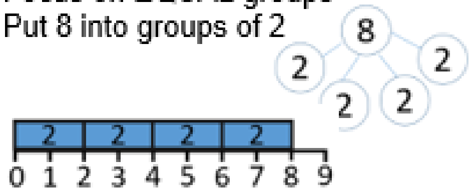
- The number ____ will not appear on the number line because ______
- There are ____ birds in each tree. There are ____ trees. There are ____ birds altogether.
- There are _____ groups/rows of _____ apples. Which is the same as ____.
- The pencils are in groups of 10, so we will count in tens.

Year 1 – Division.

	Year 1	Year 1
Times Tables		Count in multiples of twos, fives and tens (copied from Number and Place Value) count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backward (copied from Number and Place Value) count from 0 in multiples of 4, 8, 50 and 100 (copied from Number and Place Value)
Mental calculations		Making links If one teddy has two apples, how many apples will three teddies have? Here are 10 lego people If 2 people fit into the train carriage, how many carriages do we need?
Written calculations		Practical If we put two pencils in each pencil pot how many pencils will we need?

[Previous, current and future learning linked to division.](#)

Year One Division

	Mental Strategies	Concrete	Pictorial	Abstract	Vocabulary	Models, Images and resources
Year 1	Share objects into equal groups and count how many in each group and consider 'left over'. Count on from and back to zero in ones, twos, fives or tens – including starting from different points.	**Sharing using a range of objects.** Focus on EQUAL groups 6 shared by 2  There are 10 sweets. How many people can have 2 sweets each? 	**Sharing using a range of objects.** Focus on EQUAL groups 6 shared by 2  Focus on EQUAL groups Put 8 into groups of 2   20 ÷ 5 = 4	**Sharing using a range of objects.** Focus on EQUAL groups 6 shared by 2   Focus on EQUAL groups Put 8 into groups of 2  Move on to use a number line to show jumps in groups. The number of jumps equals the number of groups. 	Share Sharing grouping Equal Groups Left over Half Halving	100 square Number lines Number tracks Bead strings Tens Frame Numicon Place Value Counters Base ten (Dienes)

Year 1 – Division.

F2	Year 1 Vocabulary
Share Fair Equal Same Different Half (objects)	'One group of ten, two groups of ten,' Group Groups Half (numerical)

Maths STEM sentences:

- There are ___ equal groups with ____ in each group.
- *7 groups of 5 go into 35.*

Year 1 – Shape

F2 Vocabulary	Year 1 Vocabulary
Circle Triangle Square Rectangle shape Sides/side Same/different Long Short Equal The same Corners/points Straight Curved round Flat 2d 3d Solid Not flat Cube	Clockwise Anti-clockwise Cuboid Cylinder Pyramid Sphere

Maths STEM sentences:

- This shape could be ___ because ___.
- _____ is the odd one out because _____.
- A _____ has _____ sides/corners.

Year 1 – Measurement

F2 vocabulary	Year 1 Vocabulary
bigger/smaller heavier/ lighter taller/ shorter older/ younger longer/ shorter more / fewer Equal Balance Weigh Measure Full Half full Empty Wide Narrow Thin Order Short/shorter/shortest Long/longer/longest Further/furthest taller/tallest	greater / more than less / fewer than equal to the same length as the same weight as bigger/biggest smaller/ smallest estimate

Maths STEM sentences:

- The man is _____ than the boy.
- The ____ is ____ cubes long.
- The ____ is longer than the ____.
- The ____ is heavier/lighter than the ____.
- The ____ will hold ____ cups of water.

Year 1 – Fractions

F2	Year 1 Vocabulary
Not applicable.	Half Quarter Equal

- **Maths STEM sentences:**
- I know a whole has ____ parts. Each part is worth a ____. This is the same as 1/2.
- The whole is ____. Half of ____ is ____.

Year 2 – Place value

Year 1 Vocabulary	Year 2 Vocabulary
less/ fewer – less is something that you cannot count, fewer is something you can count. whole/ not whole part group altogether partition Children should be able to say ‘ x represents y’ One more/ one less half way between double even number	ones tens groups of ten **Emphasis on reasoning:** Children should be able to reason about position of numbers on a number line: ‘What are the values of a, b and c on the number line?’ ‘a is 36 because it is one more than the midpoint of 35’ ‘b is 79 because it is one less than 80’

Maths STEM sentences:

- There are ____ tens and ____ ones. The number is ___.
- ____ = _____ + _____
- 42 is ______ than 46 (more than, less than or equal to)
- 30 + 8 is _____ thirty eight (more than, less than or equal to)
- ____ is greater than/less than/</>/= _____
- I know that _____ is ten more than ____. The ____ column changes.
- I know ____ (digits) can also be written as ____ (words).
- A is __________ because it is one more than the midpoint of _________.
- C is ______ because it is one less than _____________.

Previous, current and future learning linked to place value.

Year 2 – Addition

SUTTON ROAD PRIMARY SCHOOL AND NURSERY

Holgate Primary and Nursery School

	Year 1	Year 2	Year 3
Number bonds	Represent and use number bonds and related subtraction facts within 20	Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100	
Mental calculations	Add and subtract onedigit and two-digit numbers to 20, including zero 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 add and subtract numbers mentally, including: * a three-digit number and ones * a three-digit number and tens * a three-digit number and hundreds	Add and subtract onedigit and two-digit numbers to 20, including zero 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 add and subtract numbers mentally, including: * a three-digit number and ones * a three-digit number and tens * a three-digit number and hundreds	Add and subtract onedigit and two-digit numbers to 20, including zero 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 add and subtract numbers mentally, including: * a three-digit number and ones * a three-digit number and tens * a three-digit number and hundreds
Written calculations	Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs (appears also in Mental Calculation)		Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction

Previous, current and future learning linked to addition.

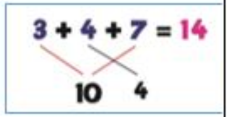
<u>Year Two Addition</u>

<table>
<tr><th></th><th>Mental Strategies</th><th>Concrete</th><th>Pictorial</th><th>Abstract</th><th>Vocabulary</th><th>Models, Images and resources</th></tr>
<tr>
<td>Year 2</td>
<td>
Use counting sticks, counting on, fingers or songs to add together 2 small amounts mentally.

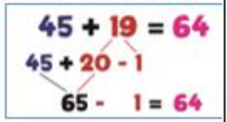
Add a single-digit number to a two-digit number, including crossing the tens boundary, e.g. 23 + 5, then 28 + 5

Add a multiple of 10 to any two-digit number, e.g. 27 + 60 add two two-digit numbers

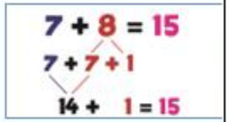
Adding three one-digit numbers



Add 9, 19, 29, … or 11, 21, 31, …



Add near doubles, e.g. 13 + 14, 39 + 40



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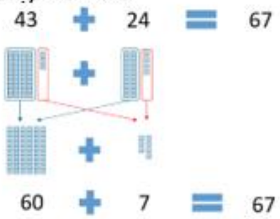
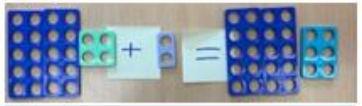
<td>
<u>2-digit + 2-digit not crossing 10s</u>

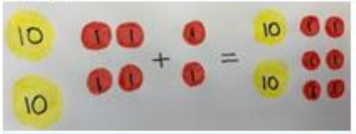
E.g. 43 + 24



24 + 2 =

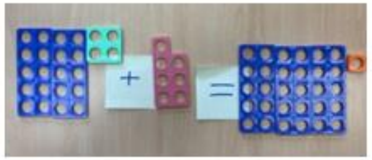


24 + 2 =

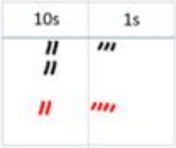


<u>2-digit + 1-digit crossing 10s</u>

e.g. 24 + 7

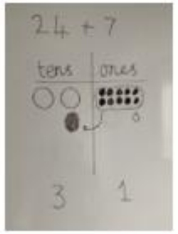

</td>
<td>
<u>2-digit + 2-digit not crossing 10s</u>

E.g. 43 + 24



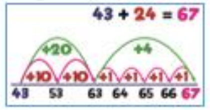
<u>2-digit + 1-digit crossing 10s</u>

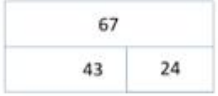
e.g. 24 + 7

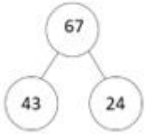


Chn could also draw base ten (if appropriate)
</td>
<td>
<u>2-digit + 2-digit not crossing 10s</u>

E.g. 43 + 24

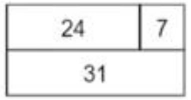


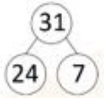




<u>2-digit + 1-digit crossing 10s</u>

e.g. 24 + 7





</td>
<td>
Add

Sum

More than

Total

Altogether

Plus

Digit

Partition into tens and ones/units
</td>
<td>
100 square

Number lines

Number tracks

Bead strings

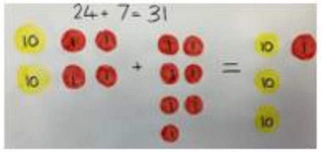
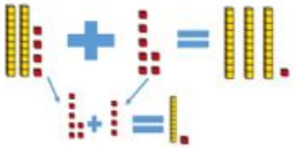
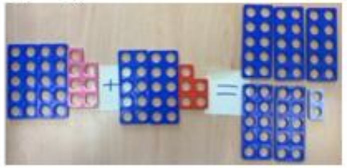
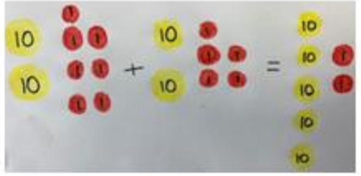
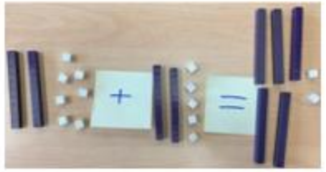
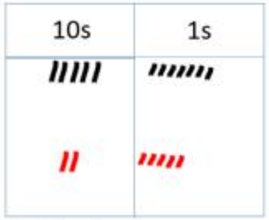
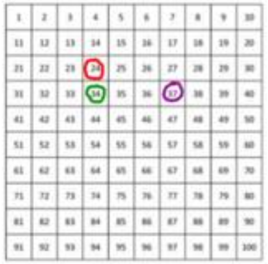
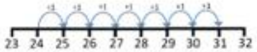
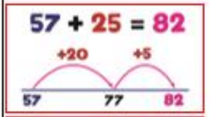
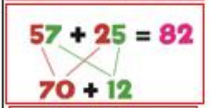
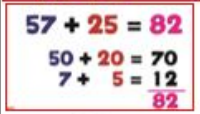
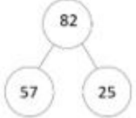
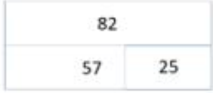
Tens Frame

Numicon

Place Value Counters

Base ten (Dienes)

Arrow Cards
</td>
</tr>
</table>

	Recall number bonds to 20 fluently and derive and use related facts to 100 Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot.	  **2-digit + 2-digit crossing 10s** Crossing the tens **27 + 25**   	**2-digit + 2-digit crossing 10s** Crossing the tens 57 + 25  Using hundred squares 	 7 + 24 = 31 24 + 7 = 31 31 = 24 + 7 31 = 7 + 24 24 + □ = 31 20 + 4 + 7 = □ 20 + 7 + □ = 31 **2-digit + 2-digit crossing 10s** Crossing the tens **57 + 25**      		

Year 2 – Addition

Year 1 Vocabulary	Year 2 Vocabulary
less/ fewer – less is something that you cannot count, fewer is something you can count. whole/ not whole Children should be able to say ' x represents y' half way between even number	addends (numbers to be added together) sum pairs of addends (encourage children to make addition of 3 addends more simple by looking for pairs of addends that sum 10) plus Cherry diagram

Maths STEM sentences:

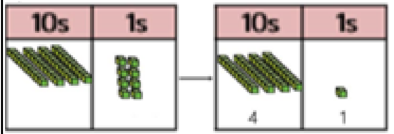
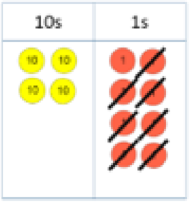
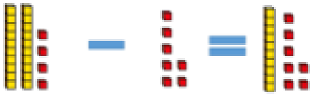
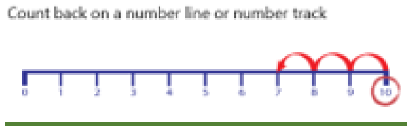
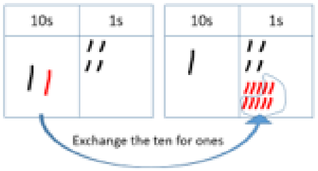
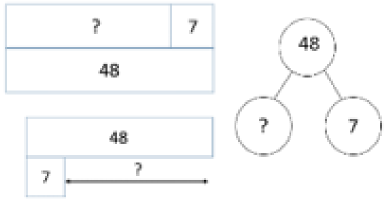
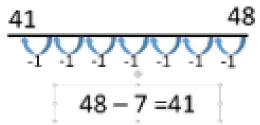
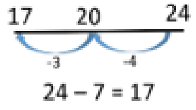
- There were ____ first, then I added ____. Now there are ____.
- *First there were <u>28</u> turtles. Then <u>32</u> joined the group. Now there are <u>60</u> turtles.*
- First there were ___, then ____ more were added. Now there are ____.
- 4 plus 3 is equal to 7. So 4 tens and plus 3 tens is equal to 7 tens.

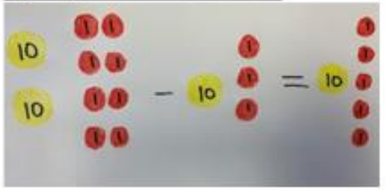
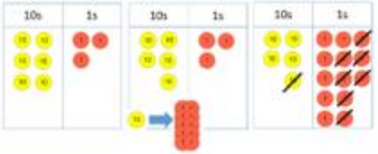
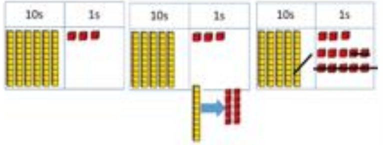
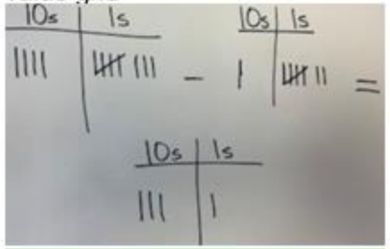
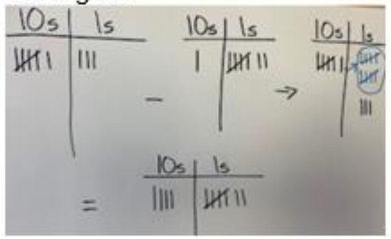
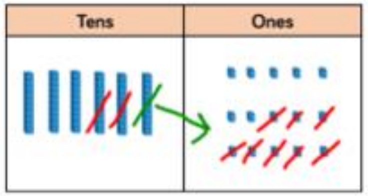
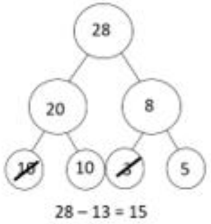
Year 2 – Subtraction

	Year 1	Year 2	Year 3
Number bonds	Represent and use number bonds and related subtraction facts within 20	Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100	
Mental calculations	Add and subtract onedigit and two-digit numbers to 20, including zero 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 add and subtract numbers mentally, including: * a three-digit number and ones * a three-digit number and tens * a three-digit number and hundreds	Add and subtract onedigit and two-digit numbers to 20, including zero 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 add and subtract numbers mentally, including: * a three-digit number and ones * a three-digit number and tens * a three-digit number and hundreds	Add and subtract one digit and two-digit numbers to 20, including zero 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 add and subtract numbers mentally, including: * a three-digit number and ones * a three-digit number and tens * a three-digit number and hundreds
Written calculations	Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs.		Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction.

[Previous, current and future learning linked to subtraction.]

Year Two Subtraction

	Mental Strategies	Concrete	Pictorial	Abstract	Vocabulary	Models, Images and resources
Year 2	Subtract a multiple of 10 from any two-digit number, e.g. 67 -20 subtract 9, 19, 29, … or 11, 21, 31… Recall number bonds to 20 fluently and derive and use related facts to 100 Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot	**Subtracting not crossing ten** 48 -7  Tens frames and Numicon can also be used (see Y1 examples)  **Subtracting a single digit crossing 10** 24 -7 – using base ten and exchanging a tens rod for ones  Tens frames and Numicon can also be used.	**Subtracting not crossing ten**  **Subtracting a single digit crossing 10** 24 -7 - children draw them 	**Subtracting not crossing ten** 48 -7 – bar models, part whole models, number lines, number sentence  **Subtracting a single digit crossing 10**  24 - 7 Can use the bar model, part whole model and number lines as shown above. 	Count back Count on Less than Difference Take away Subtract Part – whole Minus Decrease	100 square Number lines Number tracks Bead strings Tens Frame Numicon Place Value Counters Cuisenaire Base ten Arrow Cards

		Subtracting a 2-digit from a 2-digit number not crossing the tens 28 – 13 =   **Subtracting a 2-digit from a 2-digit number crossing the tens** 63-17   Tens frames and Numicon can also be used.	**Subtracting a 2-digit from a 2-digit number not crossing the tens** 28 – 13 – can draw in the place value grid  **Subtracting a 2-digit from a 2-digit number crossing the tens** 64-17 – can be drawn in place value grids  	**Subtracting a 2-digit from a 2-digit number not crossing the tens** 28 – 13 – can draw in the place value grid Can use the bar model, part whole model and number lines as shown above. Part whole below.  Introduce column subtraction wihout regrouping: 21 - 10 = 21 - 10 Record the calculation vertically subtracting the column of ones then the column of tens.		

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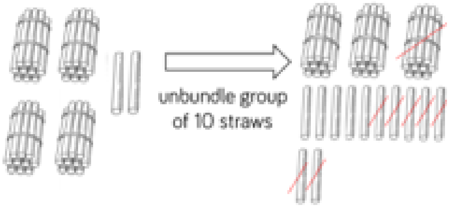
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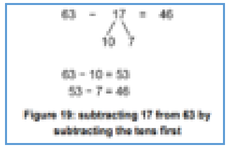
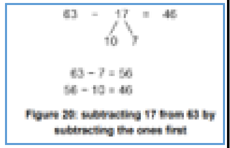
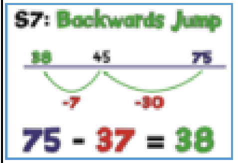
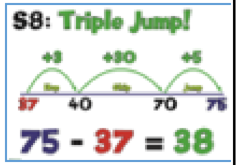
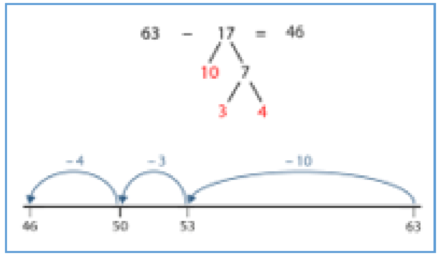
<td>Subtracting a 2-digit from a 2-digit number crossing the










ten</td>
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Year 2 – Subtraction

Year 1 Vocabulary	Year 2 Vocabulary
less/ fewer – less is something that you cannot count, fewer is something you can count. whole/ not whole part partition Children should be able to say ' x represents y' half way between even number	subtrahend minuend minus equation difference plus one minus one

Maths STEM sentences:

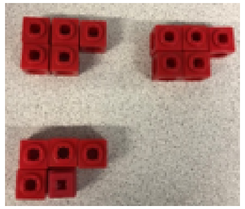
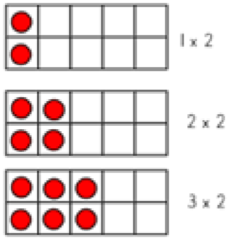
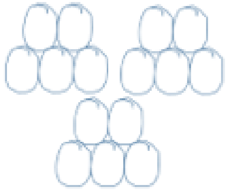
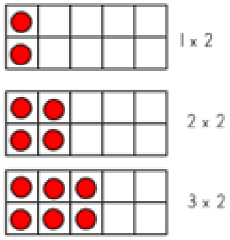
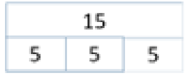
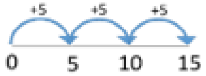
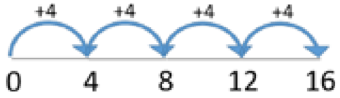
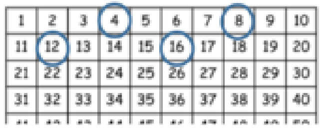
- There were ____ first, then I took away ____. Now there are ____.
- I can exchange 10 ones for 1 ten because ______
- 10 minus 3 is equal to 7. So 30 minus 3 is equal to 27.

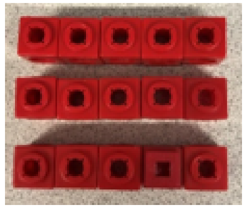
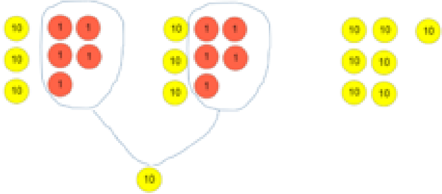
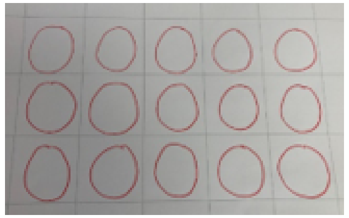
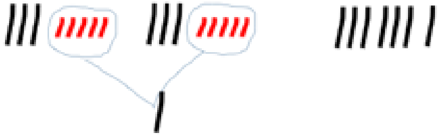
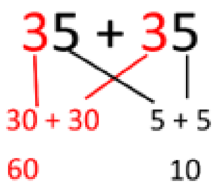
Year 2 – Multiplication

	Year 1	Year 2	Year 3
Times Tables	Count in multiples of twos, fives and tens (copied from Number and Place Value) count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backward (copied from Number and Place Value) count from 0 in multiples of 4, 8, 50 and 100 (copied from Number and Place Value)	Count in multiples of twos, fives and tens (copied from Number and Place Value) count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backward (copied from Number and Place Value) count from 0 in multiples of 4, 8, 50 and 100 (copied from Number and Place Value) Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers	Count in multiples of twos, fives and tens (copied from Number and Place Value) count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backward (copied from Number and Place Value) count from 0 in multiples of 4, 8, 50 and 100 (copied from Number and Place Value). Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables
Mental calculations			Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying multiply and divide numbers mentally drawing upon known facts perform mental calculations, including with mixed operations and large numbers Number: Multiplication and Division with Reasoning two-digit numbers times one-digit numbers, using mental and progressing to formal written methods
Written calculations		Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods.	Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods.

[Previous, current and future learning objectives for multiplication]

Year Two Multiplication

	Mental Strategies	Concrete	Pictorial	Abstract	Vocabulary	Models, Images and resources
Year 2	Add in link to Shanghai maths sessions for counting in 2's, 5's and 10's Practise to become fluent in recall and use of multiplication facts for the 2, 5 and 10 multiplication tables, (connect the 10x table to place value, and the 5x table to the divisions on the clock face) Double any multiple of 5 up to 50, eg. double 35 Find the total number of objects when they are organised into groups of 2, 5 or 10 Show that multiplication of	**Fluent in the recall and calculations of 2, 5 and 10 multiplication tables** Here is one example  3 equal groups of 5 equals 15 cubes  Tens frames can also be used to show times tables such as 2s, 5s and 10s. **Using arrays**	**Fluent in the recall and calculations of 2, 5 and 10 multiplication tables** Here is one example – hand drawn **3 x 5 = 15**   Tens frames can also be used to show times tables such as 2s, 5s and 10s. **Using arrays**	**Fluent in the recall and calculations of 2, 5 and 10 multiplication tables**   **Using a range of representations**   	Lots of Groups of Times Repeated addition Double Sets Groups, Pairs Array symbol x times as big …as wide …as long	100 square Number lines Number tracks Bead strings Tens Frame Numicon Place Value Counters Base ten (Diennes). Arrow Cards

	two numbers can be done in any order (commutative) and division of one number by another cannot Introduce the symbol for multiplication	Please see the guidance for Year 1 and using arrays below  **Doubling** See Y1. Children need to double multiples of 10 to 100, then double multiples of 5 to 100 E.g. 35 doubled – use counters – 	Please see the guidance for Year 1 and using arrays below. An example of how to demonstrate 3 x 5 is:  **Doubling** See Y1. Children need to double multiples of 10 to 100, then double multiples of 5 to 100 E.g. 35 doubled - can be drawn 	4 + 4 + 4 + 4 = 4 x 4 **Doubling** See Y1. Children need to double multiples of 10 to 100, then double multiples of 5 to 100 E.g. 35 doubled 		

Year 2 – Multiplication

Year 1 Vocabulary	Year 2 Vocabulary
'One group of ten, two groups of ten,' Group Groups Double Half	equal groups divided multiple repeated addition 'x represents the number of groups' pairs – 'How many pairs?' factor times factor equals product multiple Children should be able to reason about this: 'the order of the factors does not affect the product'

Maths STEM sentences:

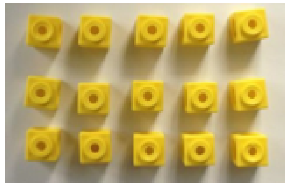
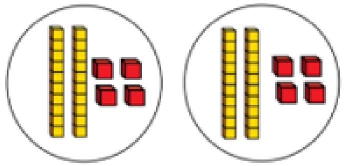
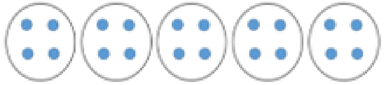
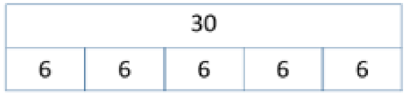
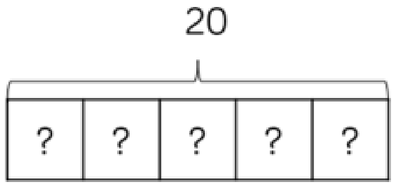
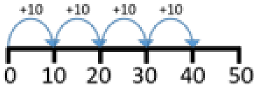
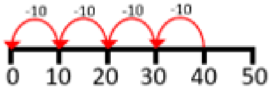
- There are ___ equal groups with ____ in each group.
- I know the total is ____ because ____.
- ___ x ____ = ____ x ____

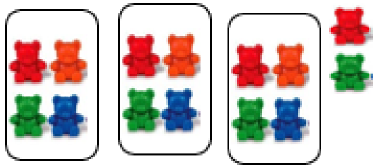
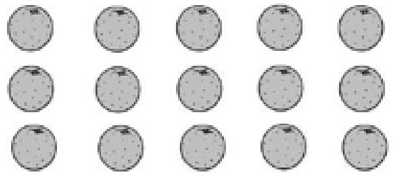
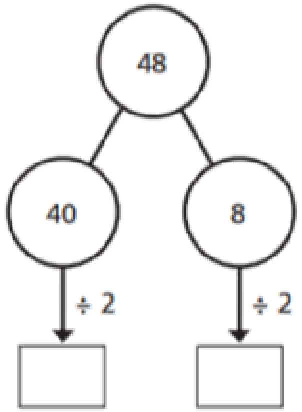
Year 2 – Division

	Year 1	Year 2	Year 3
Times Tables	Count in multiples of twos, fives and tens (copied from Number and Place Value) count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backward (copied from Number and Place Value) count from 0 in multiples of 4, 8, 50 and 100 (copied from Number and Place Value).	Count in multiples of twos, fives and tens (copied from Number and Place Value) count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backward (copied from Number and Place Value) count from 0 in multiples of 4, 8, 50 and 100 (copied from Number and Place Value).	Count in multiples of twos, fives and tens (copied from Number and Place Value) count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backward (copied from Number and Place Value) count from 0 in multiples of 4, 8, 50 and 100 (copied from Number and Place Value).
Mental calculations			Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying multiply and divide numbers mentally drawing upon known facts perform mental calculations, including with mixed operations and large numbers Number: Multiplication and Division with Reasoning two-digit numbers times one-digit numbers, using mental and progressing to formal written methods.
Written calculations		Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods.	Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods.

[Previous, current and future learning objectives for division]

Year Two Division

	Mental Strategies	Concrete	Pictorial	Abstract	Vocabulary	Models, Images and resources
Year 2	Practise to become fluent in recall and use of multiplication and division facts for the 2, 5 and 10 multiplication tables, Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot Introduce the symbol for division ÷	**Sharing into arrays of 2, 5 and 10 using a range of objects** Link division to multiplication by creating an array and thinking about the number sentences that can be created. Eg 15 ÷ 3 = 5 5 x 3 = 15 15 ÷ 5 = 3 3 x 5 = 15  48 ÷ 2 = 24 	**Sharing into arrays of 2, 5 and 10 using a range of objects** Children may begin with less sophisticated drawings of groupings **30 ÷ 5 = 6**  And move on to draw an array showing groups to make multiplication and division sentences. **15 ÷ 5 = 3** **15 ÷ 3 = 5**  20 ÷ 5 = 4	**Sharing into arrays of 2, 5 and 10 using a range of objects (using only numerals)** **30 ÷ 5 = 6**   **40 ÷ 10 = 4** On a number line they could jump forwards or backwards.   Also link to inverse number sentences: **40 ÷ 10 = 4** **40 ÷ 4 = 10** **4 x 10 = 40** **10 x 4 = 40**	Divide Share equally One each, two each…, Grouping Equal groups How many lots of…. How many many groups of… half of halved symbol ÷	100 square Number lines Number tracks Bead strings Tens Frame Numicon Place Value Counters Base ten (Dienes)

		Introducing the concept of a remainder (Greater Depth ITAF statement) Divide objects into groups or share equally and see how much is left over. **14 ÷ 3 = 4 r2** 	  **Introducing the concept of a remainder (Greater Depth ITAF statement)** Draw dots and group them to divide an amount and clearly show a remainder. **14 ÷ 4 = 3 r2**  	**Introducing the concept of a remainder (Greater Depth ITAF statement)** Jump forward in equal jumps on a number line then see how many more you need to jump to find a remainder. **13 ÷ 4 = 3 r1**  		

Year 2 – Division

Year 1 Vocabulary	Year 2 Vocabulary
‘One group of ten, two groups of ten,’ Group Groups Half (numerical)	equal groups repeated addition ‘x represents the number of groups’ divided

Maths STEM sentences:

- There are ___ equal groups with ____ in each group.
- *7 groups of 5 go into 35.*

Year 2 – Shape

Year 1 Vocabulary	Year 2 Vocabulary
Clockwise Anti-clockwise Cuboid Cylinder Pyramid Sphere	vertex vertices faces edges equal internal angles regular irregular parallel perpendicular long thin short wide triangular fatter lines of symmetry reflection mirror line

Maths STEM sentences:

- This shape could be ___ because ___.
- ____ is the odd one out because ____.
- A ____ has ____ sides/corners.
- Vertical means ______.
- The next shape in the pattern will be ____ because _____.
- I know that a ____ has edges/faces/sides because _____.
- This shape is a _________ because it has exactly ___ straight sides.

Previous, current and future learning objectives to the properties of shapes..

Previous, current and future learning objectives linked to position and direction.

Year 2 – Measurement

Year 1 Vocabulary	Year 2 Vocabulary
greater / more than less / fewer than equal to the same length as the same weight as bigger/biggest smaller/ smallest estimate	midpoint half way estimate compare

Maths STEM sentences:

- 15 cm is ____ 67 cm. (longer than, shorter than, the same as, <, > or =)
- 55cm + 10 cm ____ 55cm – 10 cm. (longer than, shorter than, the same as, <, > or =)
- The ____ is ____ cm longer than the ____.
- The tortoise has moved ____ squares to the ____.
- The _____ moved _____ squares. I can tell this because ____.
- The next shapes was _____.

Previous, current and future learning linked to measurement.

Year 2 – Fractions

Year 1 Vocabulary	Year 2 Vocabulary
Half Quarter Equal	Half Two quarters Three quarters Third

- **Maths STEM sentences:**

- I know a whole has ____ parts. Each part is worth a ____. This is the same as 1/2.
- The whole is ____. Half of ____ is ____.
- I know that ____ of the shape is shaded because ____.
- One quarter (1/4) of ____ is ____.
- I know that I have found a quarter/third of something because ____.
- ____ is equal to ____. I know this because _____

Previous, current and future learning linked to fractions.

Year 2 – Statistics

Year 1 Vocabulary	Year 2 Vocabulary
N/A	Pictograms Tally chart Block diagram Simple chart

Maths STEM sentences:

- I know that one mark means ____.
- I know that every fifth marker ____.
- I drew ____ pictures because ____.
- I know each picture is worth ____ because ____.
- How would we represent zero?

Previous, current and future learning linked to statistics.

Year 3 – Place Value

Year 2 Vocabulary	Year 3 Vocabulary
ones tens groups of ten **Emphasis on reasoning:** Children should be able to reason about position of numbers on a number line: ‘What are the values of a, b and c on the number line?’ ‘a is 36 because it is one more than the midpoint of 35’ ‘b is 79 because it is one less than 80’ midpoint half way estimate Compare	**Emphasis on base 10 structures of the number system:** Children should be able to reason about place value and say sentences such as: ’10 tens is equal to 1 hundred’ ’18 tens is equal to 10 tens and 8 more tens’ ‘100 is 10 times the size of 10’ exchange expression previous multiple (of 10/ 100) next multiple estimate compare/ing

<u>Maths STEM sentences:</u>

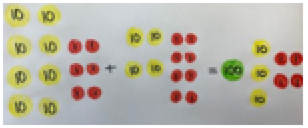
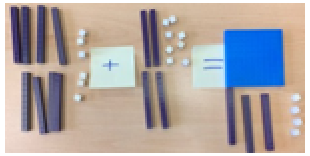
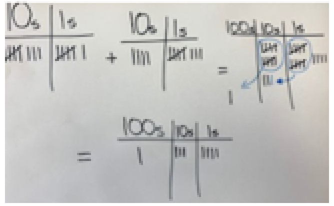
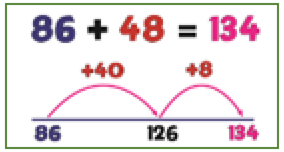
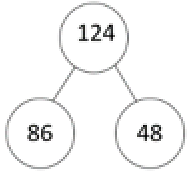
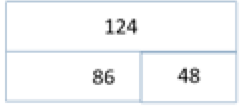
- When I partition the number ___, there are _____ hundred, ____ tens and ____ ones.
- ____ = _____ + _____ + ______
- 342 is ______ than 406 (more than, less than or equal to)
- If I added one more ____ (hundred/ten/one) the number would become ____.
- _____ is closest to 250 because _____.
- I know that _____ is ten/hundred more than ____. The ____ column changes.
- I have ordered numbers this way because ____.
- I know the next 3 numbers in the sequence would be ____.
- When rounding to the nearest ____, we look at the ____ column.
- ____ is between ____ and ____ but rounds to ____.
- I know ____ (digits) can also be written as ____ (words).
- 10 tens is equal to 1 hundred.
- 18 tens is equal to 10 tens and 8 more tens. 10 tens are equal to 100. So 18 tens are equal to 100 and 8 more tens, which is 180.
- 100 is 10 times the size of 10.
- The previous multiple of 10 is __________. The next multiple of 10 is ___________.
- The previous multiple of 100 is __________. The next multiple of 100 is ___________.

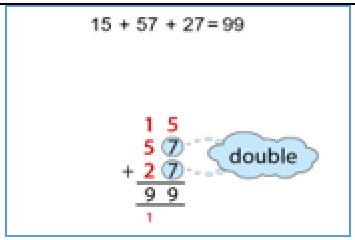
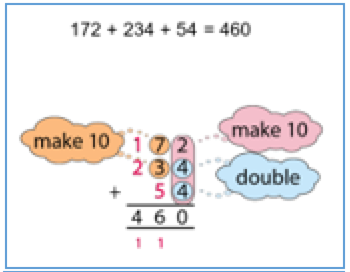
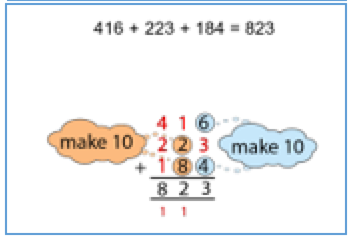
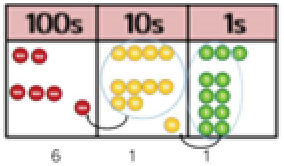
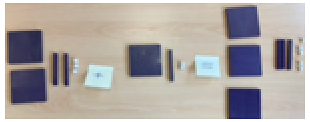
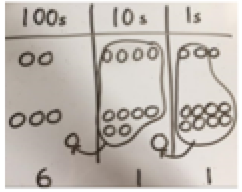
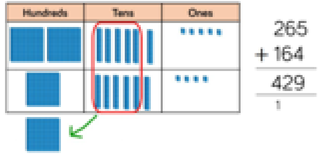
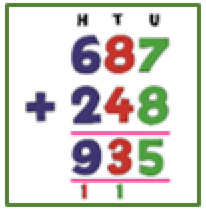
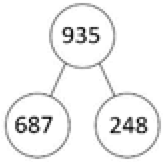
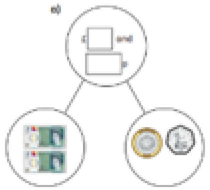
Year 3 – Addition

	Year 2	Year 3	Year 4
Number Bonds	Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100		
Mental calculations	Add and subtract one digit and two-digit numbers to 20, including zero 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 add and subtract numbers mentally, including: * a three-digit number and ones * a three-digit number and tens * a three-digit number and hundreds	add and subtract numbers mentally, including: *a three-digit number and ones *a three-digit number and tens *a three-digit number and hundreds	
Written calculations	Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs (appears also in Mental Calculation).	Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction.	Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate.

[Previous, current and future learning for addition]

Year 3 Addition

	Mental Strategies	Concrete	Pictorial	Abstract	Vocabulary	Models, Images and resources
Year 3	Use number bonds to 20 and links to bonds of multiples of 10 to 100, complements to 100 e.g. 45 + 55 = 100 Practise solving varied addition questions mentally with two-digit numbers, the answers could exceed 100. Add numbers mentally, including: • a three-digit number and ones • a three-digit number and tens • a three-digit number and hundreds Recall number bonds to 20 fluently and derive and use related facts to 100 Partition numbers in different ways Eg: 62 = 60 + 2, 50+12, 40+22 etc Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot. Apply mental strategies to written methods:	**2-digit + 2-digit crossing 10s (into 100)** See Y2 and now crossing 100s and bridging/carrying **86 + 48 = 134**  	**2-digit + 2-digit crossing 10s (into 100)** See Y2 and now crossing 100s and bridging/carrying **86 + 48 = 134** 	**2-digit + 2-digit crossing 10s (into 100)** See Y2 and now crossing 100s and bridging/carrying **86 + 48 = 134**    Introduce column addition: For 76 + 47 +47 123 1 1	Add Sum More than Total Altogether Plus Partition into hundreds, tens and ones/units Count on Carry ten Bridge ten	100 square Number lines Number tracks Tens Frame Numicon Place Value Counters Base ten (Dienes) Arrow Cards

	  	**3-digit + 3-digit** e.g. 243 + 368  **223 + 122 =** 	**3-digit + 3-digit** e.g. 243 + 368  	**3-digit + 3-digit** e.g. 243 + 368      *Decimal point for money is in Y4*		

Year 3 – Addition

Year 2 Vocabulary	Year 3 Vocabulary
addends (numbers to be added together) sum pairs of addends (encourage children to make addition of 3 addends more simple by looking for pairs of addends that sum 10) plus Cherry diagram	Complements to 100 Columnar addition

<u>Maths STEM sentences:</u>

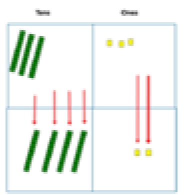
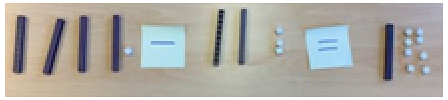
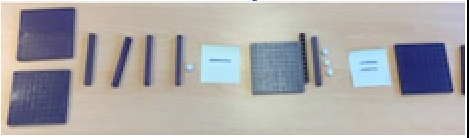
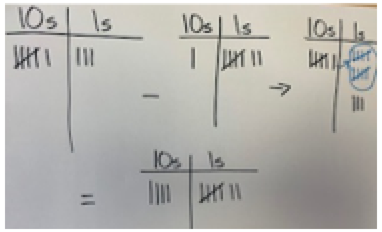
- \- Write a story for the calculation 500 + 400 = 900.
- \- Always, sometimes, never? When you add ones to a number it affects the tens column.
- \- 452 + 4 tens = _____
- ____ is greater than/less than/</>/= _____
- \- I can exchange 10 ones for 1 ten because ______
- \- I can exchange 10 tens for 1 hundred because ________

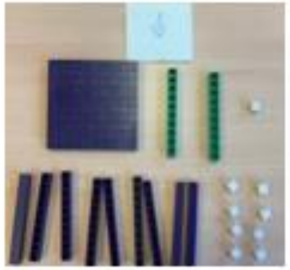
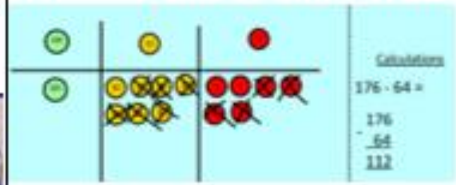
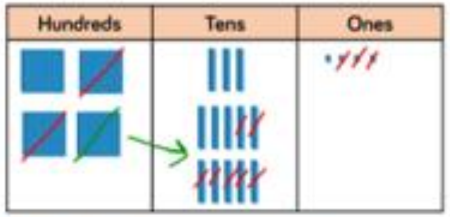
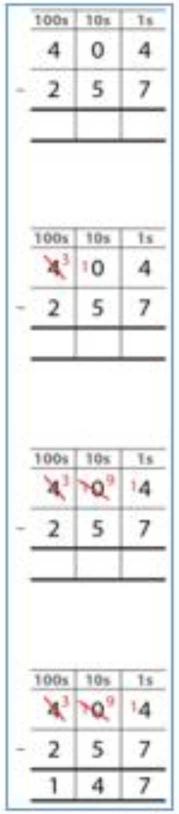
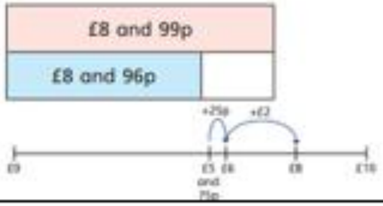
Year 3 – Subtraction

	Year 2	Year 3	Year 4
Number Bonds	Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100.		
Mental calculations	Add and subtract one digit and two-digit numbers to 20, including zero 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 add and subtract numbers mentally, including: * a three-digit number and ones * a three-digit number and tens * a three-digit number and hundreds	Add and subtract numbers mentally, including: *a three-digit number and ones *a three-digit number and tens *a three-digit number and hundreds	
Written calculations	Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs (appears also in Mental Calculation).	Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction.	Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate.

Previous, current and future learning for subtraction

Year 3 Subtraction

	Mental Strategies	Concrete	Pictorial	Abstract	Vocabulary	Models, Images and resources
Year 3	Recall number bonds to 20 and links to bonds of multiples of 10 to 100, complements to 100 e.g. 100 – 55 = 45 Practise solving varied subtraction questions mentally with two-digit numbers, the answers could exceed 100 Subtract numbers mentally, including: a three-digit number and ones	**Subtracting a 2-digit from a 2-digit number not crossing the tens** 75 - 42  Use Dienes blocks to make the bigger number then take the smaller number away. **Subtracting a 2-digit from a 2-digit number crossing the tens** 41 – 23 =  **Subtracting a 3-digit from a 3-digit number not crossing the tens** 	**Subtracting a 2-digit from a 2-digit number not crossing the tens**  **Subtracting a 2-digit from a 2-digit number crossing the tens** 64-17 – can be drawn in place value grids  	**Subtracting a 2-digit from a 2-digit number not crossing the tens** T O 8 7 – 3 4 5 3 **Subtracting a 2-digit from a 2-digit number crossing the tens** T O 7~~8~~ 2 – 2 4 5 8 **Subtracting 3 digit numbers crossing tens and hundreds** Use formal written methods where exchange is also required.	Subtraction Partition into hundreds, tens and ones Count on Carry back First Then Now Empty number line Difference Find the difference Decrease by	100 square Number lines Number tracks Bead strings Tens Frame Numicon Place Value Counters Base ten (Diennes) Arrow Cards

	a three-digit number and tens a three-digit number and hundreds groups of small numbers, e.g. 9 – 3 – 2. a two-digit number from a multiple of 10, eg. 50 - 38, 90 – 27, 68 – 35	**Subtracting 3 digit numbers crossing tens and hundreds** When using equipment children need to see the exchanging of hundreds for tens etc.    	**Subtracting 3 digit numbers crossing tens and hundreds**   **Subtracting money - no decimals** 	 **Subtracting money - no decimals** Formal part whole and counting backwards on a numberline also.  		

Year 3 – Subtraction

Year 2 Vocabulary	Year 3 Vocabulary
subtrahend Minuend Minus difference	‘5 ones minus 3 ones is equal to 2 ones’ Columnar subtraction Minuend – subtrahend = difference Missing part

Maths STEM sentences:

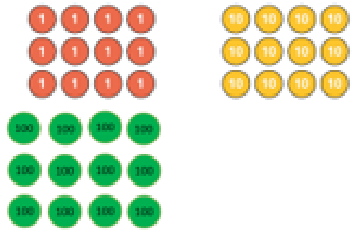
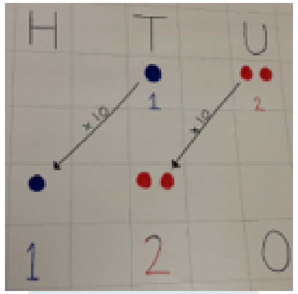
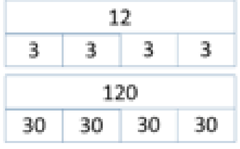
- ____ is greater than/less than/</>/= _____
- I can exchange 10 ones for 1 ten because ______
- I can exchange 10 tens for 1 hundred because ________
- If we swap the values of the subtrahend and difference, the minuend remains the same.
- There is a missing part. To find the missing part, we subtract the other part from the whole.

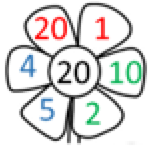
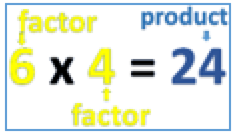
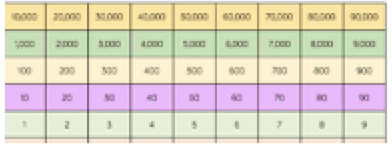
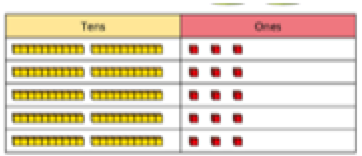
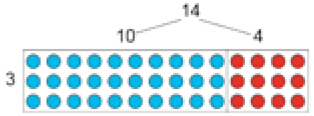
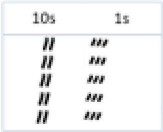
Year 3 – Multiplication

	Year 2	Year 3	Year 4
Multiplication and division facts	Count in steps of 2, 3, and 5 from 0, and in tens from any number, forwardor backward. Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers.	Count from 0 in multiples of 4, 8, 50 and 100. Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables.	Count in multiples of 6, 7, 9, 25 and 1000. Recall multiplication and division facts for multiplication tables up to 12 × 12.
Mental calculations		Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods(appears also in Written Methods).	Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers.
Written calculations	Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs.	Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods (appears also in Mental Methods).	Multiply two-digit and three-digit numbers by a one-digit number using formal written layout.

Previous, current and future learning for multiplication

Year 3 Multiplication

	Mental Strategies	Concrete	Pictorial	Abstract	Vocabulary	Models, Images and resources
Year 3	Recall and use multiplication facts for the 4, 8 and 3 multiplication tables Practise mental recall of x tables to improve fluency. Use doubling to connect the 2, 4 and 8 x tables. Use x facts to derive related facts and write mathematical statements e.g. using 3 × 2 = 6 to derive 30 × 2 =60 Develop efficient mental methods using commutativity e.g. 4 × 12 × 5 = 4 × 5 × 12 = 20 × 12 = 240) Double any two-digit number, e.g. double 39 and any multiple of 5, 10 or 100, e.g. double 340, double 800, Multiply one-digit or two-digit numbers	**Consolidate 2, 5 10 times table** Please see Y2 examples **4, 8 then 3 times table** Please see Y2 examples showing concrete groups and arrays as they hold the same principles **Make connections x10** 4 x 3, 4 x 30, 4 x 300 – use counters 	**Consolidate 2, 5 10 times table** Please see Y2 examples **4, 8 then 3 times table** Please see Y2 examples showing pictorial groups and arrays as they hold the same principles **Make connections x10** 4 x 30 = 120 – draw it Draw on a place value grid  	**Consolidate 2, 5 10 times table** Please see Y2 examples **4, 8 then 3 times table** Please see Y2 examples as they hold the same principles **Make connections x10** 4 x 3 = 12 4 x 30 =120	Lots of Groups of Times Repeated addition Double Sets Groups, Pairs Array symbol x factor product multiple ten times the size hundred times the size	100 square Number lines Number tracks Tens Frame Place Value Counters Base ten (Dienes) Arrow Cards Gattegno chart Place Value Grid

	by 10 or 100 and understand the effect e.g. 7 × 100, 46 × 10, 54 x 100 14 x 3 = 10 x 3 + 4 x 3 = 30 + 12 = 42 Factor flower for 20  Know the vocabulary below Factor multiplied by factor equals  product	Also use the Gattegno Chart to help  **Simple 2 digit by one digit** Use dienes or counters **23 x 5 = 115**  **14 x 3** 	**Simple 2 digit by one digit** Draw it in a grid 23 x 5 = 115 	**Simple 2 digit by one digit** **Add array and grid images from current policy**	a tenth the size a hundredth the size	

Year 3 – Multiplication

Year 2 Vocabulary	Year 3 Vocabulary
equal groups repeated addition 'x represents the number of groups' factor times factor equals product multiple	'3 times 5 is equal to 15' '3 times 5 tens is equal to 15 tens' '15 tens is equal to 150'

Maths STEM sentences:

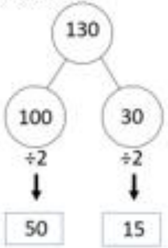
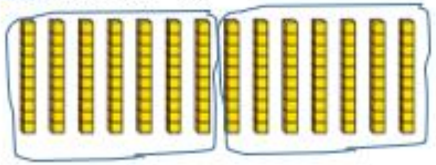
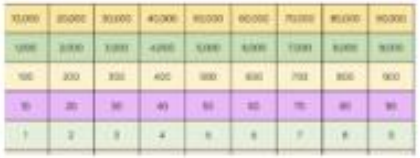
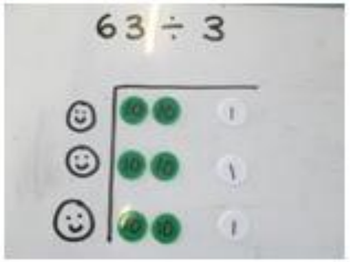
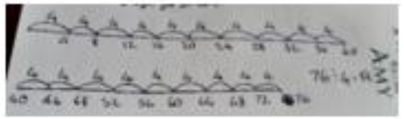
- There are ___ equal groups with ____ in each group.
- I know the total is ____ because ____.
- ___ x ____ = ____ ÷ ____. Prove it.
- ___ x ____ = ____ x ____. Prove it.
- *7 groups of 4 go into 28.*
- I can times by 4 twice to find out what times 8 is. This is because __________
- Charlotte answered the question 27 x 3 and got the answer 6021. I know the mistake she has made is ___.
- 30 is ____ times bigger than 5 so ____ x ____ = ____.
- How many different ways can you find the make 30? The method I used was ____.
- 4 times 5 is 20, so 20 divided by 5 is 4.
- 3 times 5 is equal to 15. 3 times 5 tens is equal to 15 tens. 15 tens is equal to 150.
- factor times factor is equal to product.
- The order of the factors does not affect the product.

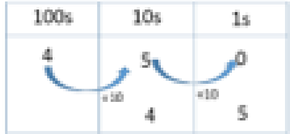
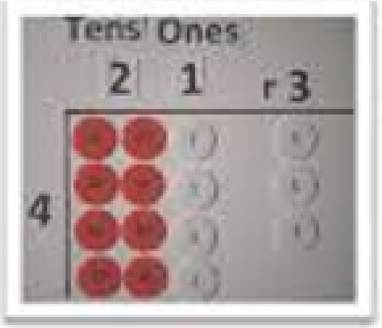
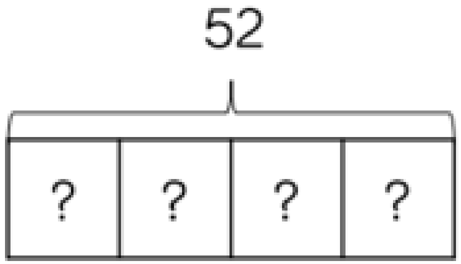
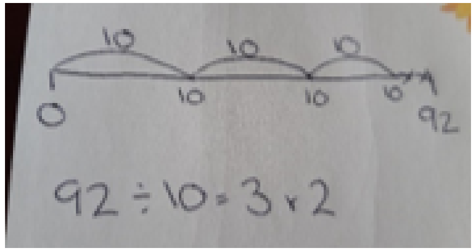
Year 3 – Division

	Year 2	Year 3	Year 4
Multiplication and division facts	Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backward. Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers.	Count from 0 in multiples of 4, 8, 50 and 100. Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables.	Count in multiples of 6, 7, 9, 25 and 1000. Recall multiplication and division facts for multiplication tables up to 12 × 12.
Mental calculations		Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods(appears also in Written Methods).	Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers.
Written calculations	Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs.	Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods (appears also in Mental Methods).	Multiply two-digit and three-digit numbers by a one-digit number using formal written layout.

Previous, current and future learning objectives for division

Year 3 Division

	Mental Strategies	Concrete	Pictorial	Abstract	Vocabulary	Models, Images and resources
Year 3	Halve any multiple of 10 up to 200, e.g. halve 170  Recall and use division facts for the 3, 4 and 8 x tables, use halving to derive division by 2, 4 and 8 Calculate and write mathematical statements for division using related x tables facts, including for TU ÷ U mentally Develop efficient mental methods using facts e.g 6 ÷ 3 = 2 and 2 = 6 ÷ 3 to derive related facts	**Variation/related number facts** **14 ÷ 2 = 7**  **So 140 ÷ 2 = 70**  Also use the Gattegno Chart to help  **2 digit divided by 1 digit no remainders (using Y3 ARE times tables)**  	**Variation/related number facts** Draw both facts **14 ÷ 2 = 7**  **140 ÷ 2 = 70**  **2 digit divided by 1 digit no remainders (using Y3 ARE times tables)** *£69 is shared between 3 children. How much money does each child get?*  	**Variation/related number facts** **14 ÷ 2 = 7** **140 ÷ 2 = 70** 14 7 7 140 70 70 **2 digit divided by 1 digit no remainders (using Y3 ARE times tables)** **76 ÷ 4 = 19** 	Divide Share equally, one each, two each…, Grouping equal groups, how many lots of, groups of… half of halved symbol ÷ Remainder Left over Repeated subtraction	100 square Number lines Number tracks Tens Frame Place Value Counters Base ten (Dienes) Arrow Cards Gattegno chart Place Value Grid

	60 ÷ 3 = 20 and 20 = 60 ÷ 3 Divide TU and HTU numbers by 10, understand the effect of ÷10 e.g. 700 ÷ 10,  Also use the Gattegno Chart to help Identify remainders when dividing by 2, 5 or 10	**2 digit divided by 1 digit with remainders (using Y3 ARE times tables)** **87 ÷ 4 = 21 r 3**  	 **2 digit divided by 1 digit with remainders (using Y3 ARE times tables)** *£65 is shared between 3 children. How much money does each child get?* 	**2 digit divided by 1 digit with remainders (using Y3 ARE times tables)** **92 ÷ 10 = 3 r2**  	a tenth of the size	

Year 3 – Division

Year 2 Vocabulary	Year 3 Vocabulary
equal groups 'x represents the number of groups' divided pairs – 'How many pairs?'	divided by

Maths STEM sentences:

- There are ___ equal groups with ____ in each group.
- ___ x ____ = ____ ÷ ____. Prove it.
- ___ x ____ = ____ x ____. Prove it.
- *7 groups of 4 go into 28.*
- I can times by 4 twice to find out what times 8 is. This is because __________
- Charlotte answered the question 27 x 3 and got the answer 6021. I know the mistake she has made is ___.
- 30 is ____ times bigger than 5 so ____ x ____ = ____.
- How many different ways can you find the make 30? The method I used was ____.
- 4 times 5 is 20, so 20 divided by 5 is 4.
- 3 times 5 is equal to 15. 3 times 5 tens is equal to 15 tens. 15 tens is equal to 150.
- factor times factor is equal to product.
- The order of the factors does not affect the product.

Year 3 – Shape

Year 2 Vocabulary	Year 3 Vocabulary
vertex vertices faces edges equal internal angles regular irregular parallel perpendicular long thin short wide triangular fatter lines of symmetry reflection mirror line	quarter turn three-quarter turn North, South, East, West forward right angle parallel perpendicular quadrilaterals Children should be able to follow instructions to draw shapes: 'mark the six vertex and join the points to draw the hexagon' 'complete the square' 'extend the sides'

Maths STEM sentences:

- This shape could be ___ because ___.
- ____ is the odd one out because ____.
- Vertical means ______.
- The next shape in the pattern will be ____ because _____.
- I know that a ____ has edges/faces/sides because _____.
- ____ is less than a right angle because ___.

Previous, current and future learning objectives for properties of shape

Previous, current and future learning objectives for position and direction

Year 3 – Measures

Year 2 Vocabulary	Year 3 Vocabulary
midpoint half way estimate compare	Perimeter Volume Capacity

Maths STEM sentences:

- 1m = ____ cm because _____
- 1 cm = ____ mm because ____.
- 565cm + 10 cm ____ 565cm – 10 cm. (longer than, shorter than, the same as, <, > or =)
- The ____ is ____ cm longer than the ____.
- The next shapes was _____.
- To find the perimeter, I ______
- The _____ shape has the longest perimeter because ____.
- These 2 lines are parallel because they are always the same distance apart. They will never meet no matter how far we extend them.
- These 2 lines are perpendicular because they are at right angles to each other.

Previous, current and future learning objectives for measures

Year 3 – Fractions

Year 2 Vocabulary	Year 3 Vocabulary
One third One quarter One half Three quarters	**Emphasis on part-whole relationships:** Children should be able to use this precise language when referring to shape, measure and groups of things: 'The whole is divided into 3 equal parts. 1 of these parts is shaded' fraction bar denominator numerator $\frac{5}{8}$ is five one eighths This language should also be modelled when calculating with fractions. diagram highlighted/ shaded set (in the context of groups or arrays) find (one tenth of 40) interval (in the context of a number line) position points ('label the points on this number line')
Maths Sentence Stems • I know a whole has ____ parts. Each part is worth a ____. This is the same as <u>1/8</u>. • The whole is ____. Half of ____ is ____. • I know that ____ of the shape is shaded because ____. • One quarter (2/3) of ____ is ____. • I know that I have found a fifth of something because ____. • ____ is equal to ____. I know this because _____ • I know a unit fraction has a numerator of ____. An examples of one is ____. • I know a non-unit fraction has a numerator that is ____ than ____. An example of one is ____. • I know that the fraction ____ has been shaded because _____ • I know ____ tenths are shaded because ____.	• I know that I need ____ tenths to make a whole. • When I am writing tenths, the ____ is always. (denominator) • If I start at _____ tenths, ____ will be next. • I know that the ____ tenths comes between ___ and ___. • I know equivalent means ____. • 36 ÷ 4 9 so 1/4 of 36 = 9. • The whole is 12 oranges. The whole is divided into 4 equal parts." "Each part is of the whole. of 12 oranges is 3 oranges. • To find of 15, we divide 15 into 5 equal parts." "15 divided by 5 is equal to 3, so of 15 is equal to 3.

[Previous, current and future learning objectives for fractions]

Year 3 – Statistics

Year 2 Vocabulary	Year 3 Vocabulary
Pictograms Tally chart Block diagram Simple chart	Bar chart Simple scales

Maths STEM sentences:

- I drew ____ pictures because ____.
- I know each picture is worth ____ because ____.
- I know the greatest/smallest amount shown on the pictogram is ____ because ____.

Previous, current and future year groups learning objectives for Statistics

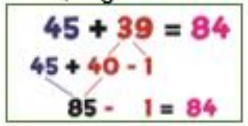
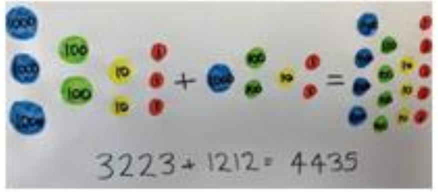
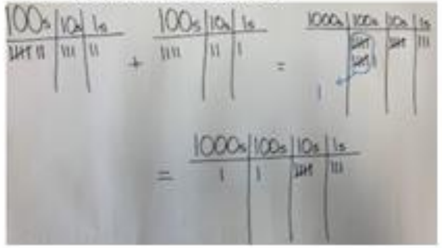
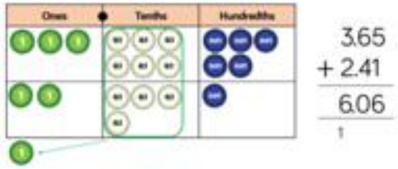
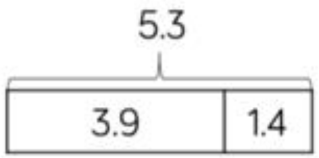
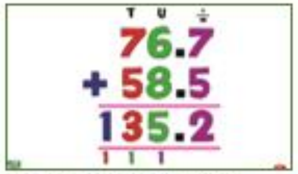
Year 4 – Place Value

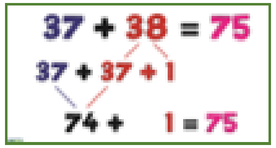
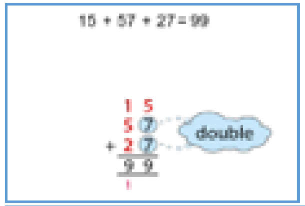
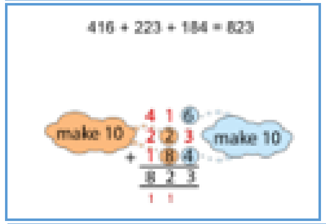
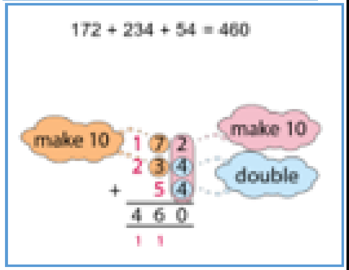
Year 3 Vocabulary	Year 4 Vocabulary
Children should be able to reason about place value and say sentences such as: ’10 tens is equal to 1 hundred’ ’18 tens is equal to 10 tens and 8 more tens’ ‘100 is 10 times the size of 10’ exchange expression previous multiple (of 10/ 100) next multiple estimate compare/ing	Children should reason about place value, as in year 3, now extending to thousands. Children should build on their learning from year 3 to find the previous and next multiple of a thousand. round/ed /ing closest multiple data structure (‘describe the structure’ in relation to representations)
<u>Maths STEM sentences:</u> • When I partition the number ___, there are ____, thousands, _____ hundred, ____ tens and ____ ones. • ____ = _____ + _____ + ______ + _____ • If I added one more ____ (thousand/hundred/ten/one) the number would become ____. • _____ is closest to 2500 because _____. • I know that _____ is ten/hundred/thousand more than ____. The ____ column changes. • I have ordered numbers this way because ____. • I know the next 3 numbers in the sequence would be ____. • There is no zero in roman numerals because ____. • When rounding to the nearest ____, we look at the ____ column.	• ____ is between ____ and ____ but rounds to ____. • Rounding to the nearest _____ is similar to rounding to the nearest _____ because _____. Rounding to the nearest _____ is different to rounding to the nearest _____ because ____. • Counting in 1000’s is similar/different to counting in 1’s because ______. • A negative number is _____. • I know ____ (digits) can also be written as ____ (words). • 10 hundreds is equal to 1 thousand. • 18 hundreds is equal to 10 hundreds and 8 more hundreds. 10 hundreds is equal to 1,000. So 18 hundreds is equal to 1,000 and 8 more hundreds, which is 1,800. • 1000 is 10 times the size of 100. 1,800 is 10 times the size of 180. • The previous multiple of 100 is ______. The next multiple of 100 is _______. • The previous multiple of 1000 is _________. The next multiple of 1000 is ______.

Year 4 – Addition

	Year 3	Year 4	Year 5
Mental calculations	Add and subtract numbers mentally, including: *a three-digit number and ones *a three-digit number and tens *a three-digit number and hundreds		
Written calculations	Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction.	Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate.	Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction).
Previous, current and future learning objectives for addition			

Year 4 Addition

	Mental Strategies	Concrete	Pictorial	Abstract	Vocabulary	Models, Images and resources
Year 4	Practise mental methods with increasingly large numbers to aid fluency Add numbers mentally, including: A 3-digit number and hundreds A 4-digit number and thousands Add any pair of two-digit numbers, including crossing the tens and 100 boundary, e.g. 47 + 58 add a near multiple of 10, e.g. 45 + 39  Add near doubles of two-digit numbers, e.g. 38 + 37	Use of place value counters to add 4 digit numbers and also money too.  	Use of place value grid.   	4-digit numbers and decimals - same number of digits.  Money up to 4 digits  	Add Sum More than Total Altogether Plus Partition into thousands, hundreds, tens and ones Count on Carry/Bridge ten Carry/Bridge 100 Two digit three digit Four digit Crossing tens boundary	100 square Number lines Number tracks Place Value Counters Base ten (Dienes). Arrow Cards

	    Understand addition as inverse of subtraction.				Inverse	

Year 4 – Addition

Year 3 Vocabulary	Year 4 Vocabulary
Complements to 100 Columnar addition	See previous year groups

<u>Maths STEM sentences:</u>

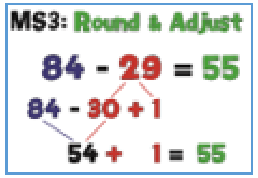
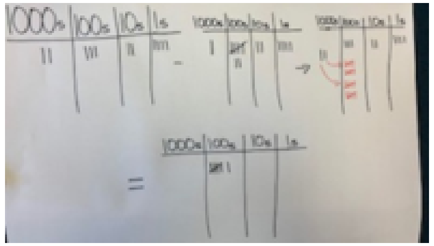
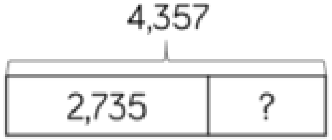
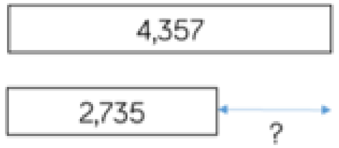
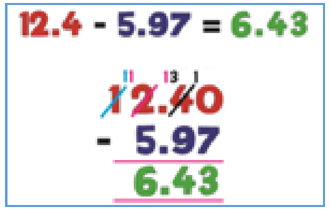
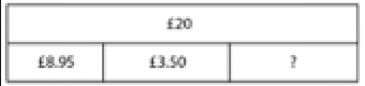
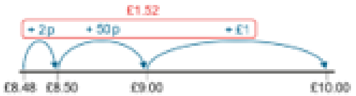
- Write a story for the calculation 5000 + 4000 = 9000.
- Always, sometimes, never? When you add hundreds to a number it affects the thousands column.
- 452 + 4 thousand = _____
- ____ is greater than/less than/</>/= _____
- I know that when I add a bigger number it ______.
- I know _____ could be the right/wrong answer because ____.
- I know the inverse of addition is _____ because ____.
- I can exchange 10 ones for 1 ten because ______
- I can exchange 10 tens for 1 hundred because ________
- I can exchange 10 hundreds for 1 thousand because _________
- 8 plus 6 is equal to 14, so 8 hundreds plus 6 hundreds is equal to 14 hundreds.14 hundred is equal to 1,400.

Year 4 – Subtraction

	Year 3	Year 4	Year 5
Mental calculations	Add and subtract numbers mentally, including: *a three-digit number and ones *a three-digit number and tens *a three-digit number and hundreds		
Written calculations	Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction	Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate	Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)

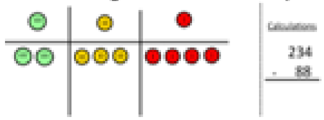
Previous, current and future learning objectives for subtraction

Year 4 Subtraction

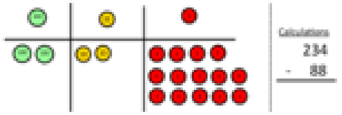
	Mental Strategies	Concrete	Pictorial	Abstract	Vocabulary	Models, Images and resources
Year 4	Practise mental methods with increasingly large numbers to aid fluency Subtract any pair of two-digit and three-digit numbers, including crossing the 10 and 100 boundary, e.g. 58 - 23 Count on and back in 10s from any number Subtract a near multiple of 10, e.g. 84 - 29  Understand subtraction as inverse of addition	**Subtracting 4 digit numbers crossing tens and hundreds** See Y3 guidance for 3 digit numbers – it is the same principle. **Subtracting with money up to 4 digits using decimals** Use with real money to show how to find differences	**Subtracting 4 digit numbers crossing tens and hundreds** See Y3 guidance for 3 digit numbers – it is the same principle.    **Subtracting with money up to 4 digits using decimals** Children can draw the coins and notes and show the exchange.	**Subtracting 4 digit numbers crossing tens and hundreds** See Y3 guidance for 3 digit numbers – it is the same principle. **Subtracting with money up to 4 digits using decimals**   	Subtraction Partition into thousands, hundreds, tens and ones Count on Carry back First Then Now Difference Find the difference Decrease / reduced by	100 square Number lines Number tracks Place Value Counters Base ten Arrow Cards

Use Dienes first then move to place value counters. Start with one exchange before moving onto subtractions with 2 exchanges.

Make the larger number with the place value counters

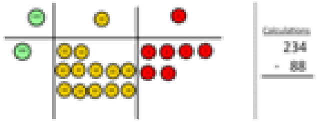


Start with the ones. I can't take away 8 ones. I need to exchange a ten for ten ones:

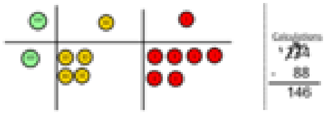


Now I can subtract 8 ones from 14.

Next look at the tens. I can't take away 8 tens. I need to exchange a hundred for 10 tens:



Now I can take eight tens from the 12 tens and complete the subtraction.



Show children how the concrete method links to the written method alongside their working. Cross out the numbers when exchanging and show where we write our new amount.

Year 4 – Subtraction

Year 3 Vocabulary	Year 4 Vocabulary
'5 ones minus 3 ones is equal to 2 ones' Columnar subtraction Minuend – subtrahend = difference Missing part	See previous year groups.

<u>Maths STEM sentences:</u>

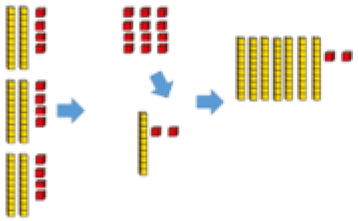
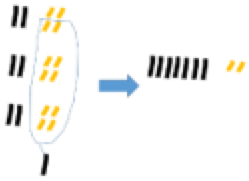
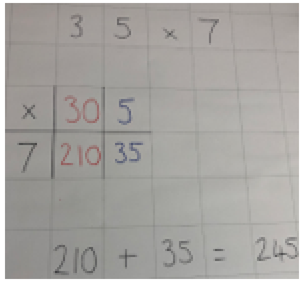
- Write a story for the calculation 5000 + 4000 = 9000.
- Always, sometimes, never? When you add hundreds to a number it affects the thousands column.
- 452 + 4 thousand = _____
- ____ is greater than/less than/</>/= _____
- I know that when I subtract a smaller number it ____.
- I know _____ could be the right/wrong answer because ____.
- I know the inverse of addition is _____ because ____.
- I can exchange 10 ones for 1 ten because ______
- I can exchange 10 tens for 1 hundred because ________
- I can exchange 10 hundreds for 1 thousand because _________
- 8 plus 6 is equal to 14, so 8 hundreds plus 6 hundreds is equal to 14 hundreds.14 hundred is equal to 1,400.

Year 4 – Multiplication

	Year 3	Year 4	Year 5
Multiplication and division facts	Count from 0 in multiples of 4, 8, 50 and 100. Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables.	Count in multiples of 6, 7, 9, 25 and 1000. Recall multiplication and division facts for multiplication tables up to 12 × 12.	Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 (copied from Number and Place Value).
Mental calculations	Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods(appears also in Written Methods).	Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers.	Multiply and divide numbers mentally drawing upon known facts.
Written calculations	Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods (appears also in Mental Methods).	Multiply two-digit and three-digit numbers by a one-digit number using formal written layout.	Multiply numbers up to 4 digits by a one-or two-digit number using a formal written method, including long multiplication for two-digit numbers. Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context.

Previous, current and future learning objectives for multiplication

Year 4 Multiplication

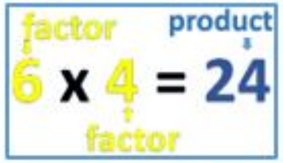
	Mental Strategies	Concrete	Pictorial	Abstract	Vocabulary	Models, Images and resources
Year 4	Recall and practise multiplication facts for tables up to 12 × 12 to aid fluency. Use place value, known and derived facts to multiply mentally, including multiplying by 0 and 1 TU by 4 or 8, eg. 26 × 4 by doubling three numbers together two digit by a unit eg. 17 × 3 numbers to 1000 by 10 and 100 (whole-number answers) eg. 325 × 10, 42 × 100 Extend mental methods to HTU to derive facts e.g. 200 × 3 = 600 into 600 ÷ 3 = 200 Recognise and use factor pairs e.g. give the factor pair associated with a multiplication fact, (if	**Consolidate 3, 4, 8 times table** See Y3 guidance - same principle **Learn the remaining tables to x 12** See Y2 examples showing concrete groups and arrays as they hold the same principles **Multiply 2 digit by one digit** 24 x 3 – Use Dienes or counters 	**Consolidate 3, 4, 8 times table** See Y3 guidance - same principle **Learn the remaining tables to x 12** See Y2 examples showing pictorial groups and arrays as they hold the same principles **Multiply 2 digit by one digit** 24 x 3 – Draw it  **Make connections x10 x 100** The counters can be drawn also Using	**Consolidate 3, 4, 8 times table** See Y3 guidance - same principle **Learn the remaining tables to x 12** See Y3 guidance - same principle **Multiply 2 digit by one digit**  **Make connections x10 x 100** 12 x 10 = 120 12 x 100 = 1200	Lots of Groups of Times Repeated addition Double Sets Groups, Pairs Array symbol x factor product multiple ten times the size hundred times the size	100 square Number lines Number tracks Tens Frame Numicon Place Value Counters. Base ten (Diennes). Arrow Cards Gattegno chart Place Value Grid

2 x 3 = 6 then 6 has the factor pair 2 and 3)

Factor flower for 20

Know the vocabulary below

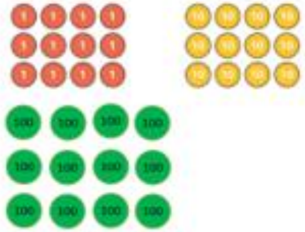
Factor multiplied by factor equals product



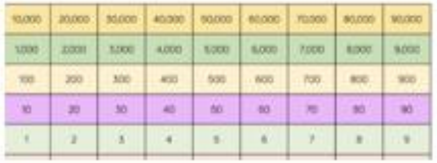
Use divisibility tests to identify multiples of 2, 4, 10 and 5

<u>**Make connections x10 x 100**</u>

4 x 3, 4 x 30, 4 x 300 – use counters

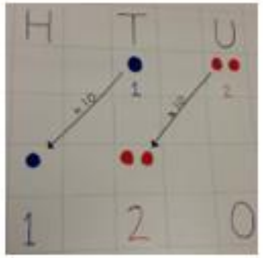


Also use the Gattegno Chart to help

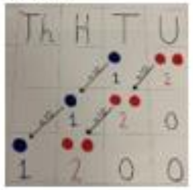


10,000	20,000	30,000	40,000	50,000	60,000	70,000	80,000	90,000
1,000	2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000
100	200	300	400	500	600	700	800	900
10	20	30	40	50	60	70	80	90
1	2	3	4	5	6	7	8	9

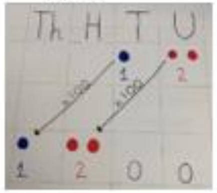
X 10



First



then



a tenth the size

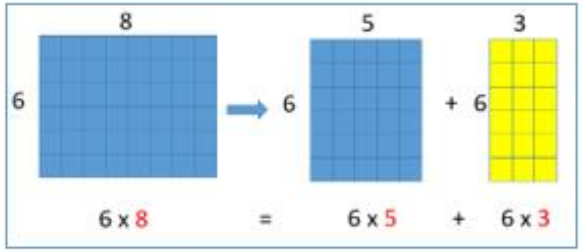
a hundredth the size

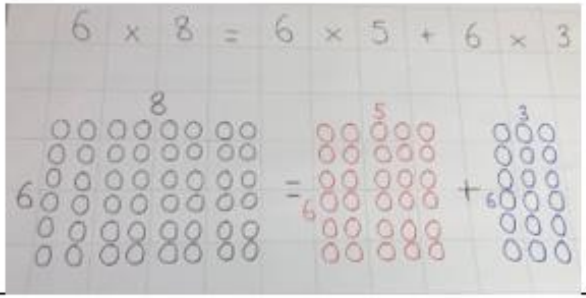
scaling

adjacent multiples

Understand the distributive law. Where a factor can be partitioned and multiplied out.

$a \times (b + c) = a \times b + a \times c$ and $a \times (b - c) = a \times b - a \times c$





Year 4 – Multiplication

Year 3 Vocabulary	Year 4 Vocabulary
‘3 times 5 is equal to 15’ ‘3 times 5 tens is equal to 15 tens’ ’15 tens is equal to 150’	Children should be able to use this vocabulary to reason: ‘If I multiply the dividend by 100, and the divisor by 100 the quotient remains the same.’ ‘If we swap the values of the divisor and the quotient, the dividend remains the same.’ Children should be able to reason about calculation: ‘Explain what mistake x has made.’

<u>Maths STEM sentences:</u>

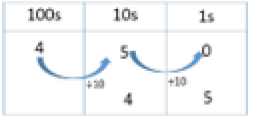
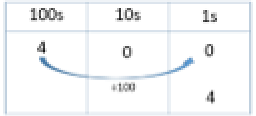
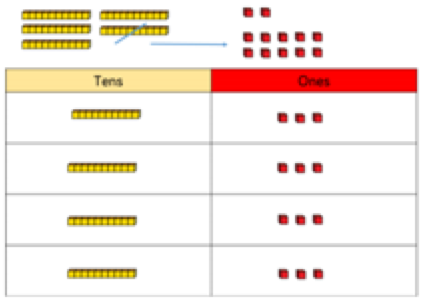
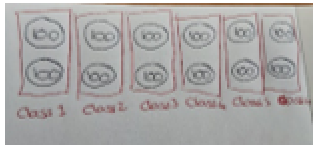
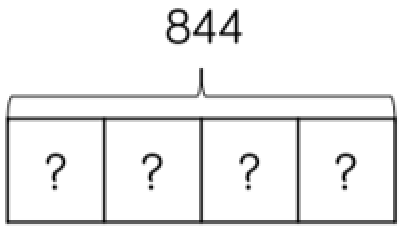
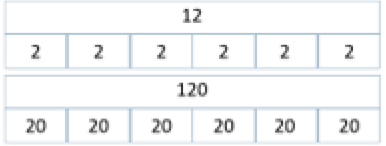
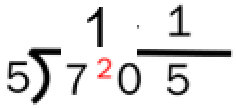
- There are ___ equal groups with ____ in each group.
- I know the total is ____ because ____.
- ___ x ____ = ____ ÷ ____. Prove it.
- ___ x ____ = ____ x ____. Prove it.
- *<u>7</u> groups of <u>8</u> go into <u>56</u>.*
- I know that when I times by 4, I need to ____ to times by 8.
- I know the inverse of multiplication is _____ because ____.
- I know the rule to multiplying/divide by 10/100 is _____.
- How many different ways can you find the make 30? The method I used was ____.
- I know I will produce a greater number if I multiply by 100 rather than 10 because ____.
- I know that zero means ____.
- I know that grouping/sharing mean _____. My example is ____.
- ____ is a factor of _____.

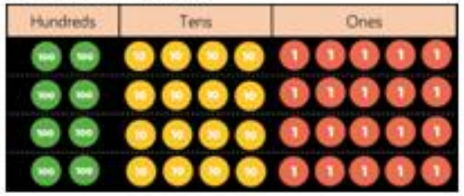
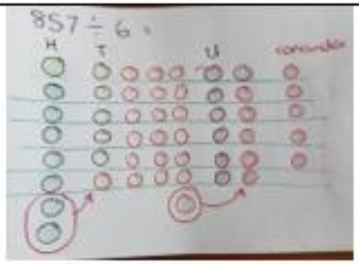
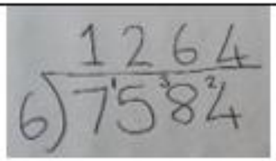
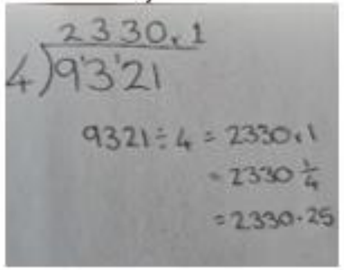
Year 4 – Division

	Year 3	Year 4	Year 5
Multiplication and division facts	Count from 0 in multiples of 4, 8, 50 and 100. Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables.	Count in multiples of 6, 7, 9, 25 and 1000. Recall multiplication and division facts for multiplication tables up to 12 × 12.	Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 (copied from Number and Place Value).
Mental calculations	Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods(appears also in Written Methods).	Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers.	Multiply and divide numbers mentally drawing upon known facts.
Written calculations	Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods (appears also in Mental Methods).	Multiply two-digit and three-digit numbers by a one-digit number using formal written layout.	Multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers. Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context.

Previous, current and future learning objectives for division

Year 4 and Year 5 Division

	Mental Strategies	Concrete	Pictorial	Abstract	Vocabulary	Models, Images and resources
Year 4 **Year 5**	Divide numbers mentally using known facts for all multiplication tables to 12 x 12 Practise and extend mental methods to three-digit numbers to derive facts e.g. 200 × 3 = 600 into 600 ÷ 3 = 200 Divide multiples of 10 up to 1000 by 10 E.g. 120 ÷ 10  Divide multiples of 100 up to 10, 000 by 100 e.g. 600 ÷ 100 or 2800 ÷ 100  Find halves of multiples of 10, even numbers to 200 and	**Variation/related number facts** E.g. 1200 pencils shared between 6 classes  **52 ÷ 4 =**  **Year 4 - 3-digit number divided by 1-digit (Short division) using**	**Variation/related number facts** E.g. 1200 pencils shared between 6 classes   **Year 4 - 3-digit number divided by 1-digit (Short division) using all times table facts and including reminders** **Year 5 - 4-digit number divided by 1-digit (Short division) using all times table facts and including reminders** **857 ÷ 6 = 142r5**	**Variation/related number facts** E.g. 1200 pencils shared between 6 classes  **Year 4 - 3-digit number divided by 1-digit (Short division) using all times table facts and including reminders** **Year 5 - 4-digit number divided by 1-digit (Short division) using all times table facts and including reminders** £705 shared between five using short division layout 	Divide Share equally, one each, two each…, Grouping equal groups, how many lots of, groups of… half of halved symbol ÷ Remainder Left over Repeated subtraction	100 square Number lines Number tracks Tens Frame Place Value Counters Base ten (Dienes) Arrow Cards Gattegno chart Place Value Grid

	three-digit multiples of 10 to 500 e.g. 760 ÷ 2	**all times table facts and including reminders** **Year 5 - 4-digit number divided by 1-digit (Short division) using all times table facts and including reminders** **980 ÷ 5 = 245**  **376 ÷ 3 = 122r1** 		 Year 5 to also interpret that remainder as a fraction or simple decimal (if known decimal fact). 	a tenth or hundredth of the size Fraction Decimals	

Year 4 – Division

Year 3 Vocabulary	Year 4 Vocabulary
divided by	dividend divisor quotient remainder

Maths STEM sentences:

- There are ___ equal groups with ____ in each group.
- I know the total is ____ because ____.
- ___ x ____ = ____ ÷ ____. Prove it.
- ___ x ____ = ____ x ____. Prove it.
- *7 groups of 8 go into 56.*
- I know that when I times by 4, I need to ____ to times by 8.
- I know the inverse of multiplication is _____ because ____.
- I know the rule to multiplying/divide by 10/100 is _____.
- How many different ways can you find the make 30? The method I used was ____.
- I know I will produce a greater number if I multiply by 100 rather than 10 because ____.
- I know that zero means ____.
- I know that grouping/sharing mean _____. My example is ____.
- ____ is a factor of _____.
- If the dividend is a multiple of the divisor there is no remainder. If the dividend is not a multiple of the divisor, there is a remainder. The remainder is always less than the divisor.
- If we swap the values of the divisor and quotient, the dividend remains the same.

Year 4 – Money

Year 3 Vocabulary	Year 3 Vocabulary
No specific vocabulary – ensure use of relevant vocabulary for addition, subtraction, multiplication and division is applied.	No specific vocabulary – ensure use of relevant vocabulary for addition, subtraction, multiplication and division is applied.

Maths STEM sentences:

- I know p means ____.
- £____ = ____p. Convince me.
- The lowest/greatest total that can be made is _____.
- There are £_____ and _____p.
- If I spend ____, I will get ____ change because ___.

[Previous, current and future learning objectives for addition and subtraction]

[Previous, current and future learning objectives for multiplication and division]

Year 4 – Shape

Year 3 Vocabulary	Year 4 Vocabulary
quarter turn three-quarter turn North, South, East, West forward right angle parallel perpendicular quadrilaterals Children should be able to follow instructions to draw shapes: 'mark the six vertex and join the points to draw the hexagon' 'complete the square' 'extend the sides	polygon translate/translated/ translation x axis y axis co-ordinates interior angles 'drawn to scale/ not drawn to scale' symmetrical pattern

Maths STEM sentences:

- This shape could be ___ because ___.
- ____ is the odd one out because ____.
- Vertical means ______.
- The next shape in the pattern will be ____ because _____.
- I know that a ____ has edges/faces/sides because _____.
- ____ angle is bigger/smaller than a ____ angle.
- An ____ angle is ___ degrees.

Previous, current and future learning objectives for properties of shape

Previous, current and future learning objectives for position and direction

Year 4 – Measures

Year 3 Vocabulary	Year 4 Vocabulary
Perimeter Volume Capacity	Kilometre rectilinear shapes

Maths STEM sentences:

- 1m = ____ cm because _____
- 1 cm = ____ mm because ____.
- 565cm + 10 cm ____ 565cm – 10 cm. (longer than, shorter than, the same as, <, > or =)
- The ____ is ____ cm longer than the ____.
- The next shapes were _____.
- To find the perimeter/area, I ______
- The _____ shape has the longest perimeter because ____.
- The area of the shape is _____ squared centimetres or ____cm^2.
- This is a regular polygon, because all of the sides are the same length, and all of the interior angles are equal.

Previous, current and future learning objectives for measures

SUTTON ROAD PRIMARY SCHOOL AND NURSERY

Year 4 – Fractions

Holgate Primary and Nursery School

Year 3 Vocabulary	Year 4 Vocabulary
Children should be able to use this precise language when referring to shape, measure and groups of things: 'The whole is divided into 3 equal parts. 1 of these parts is shaded' fraction bar denominator numerator $\frac{5}{8}$ is five one eighths This language should also be modelled when calculating with fractions. diagram highlighted/ shaded set (in the context of groups or arrays) find (one tenth of 40) interval (in the context of a number line) position points ('label the points on this number line')	Previous whole number, next whole number Mixed number Equivalent Improper fraction
<u>Maths STEM sentences:</u> • I know a whole has ____ parts. Each part is worth a ____. This is the same as <u>1/8</u>. • I know that ____ of the shape is shaded because ____. • I know that I have found a fifth of something because ____. • ____ is equal to ____. I know this because _____ • I know that the fraction ____ has been shaded because _____ • I know ____ hundredths are shaded because ____. • I know that I need ____ hundredths to make a whole/tenths. • When I am writing hundredths, the ____ is always. (denominator) • If I start at _____ hundredths, ____ will be next. • I know that the ____ hundredths comes between ___ and ___. • I know equivalent means ____.	• The numerator/denominator is _____ and means ____. • I know that a decimals is ____. • I know that 0.1 metres is ____ in centimetres. • I know that a zero is important when dividing a number by 10 because _____. • When I partition the number ___, there are ____ ones, _____ tenths, and ____ hundredths • ____ = _____ + _____ + ______ + _____ (with decimal places). • I know the value of the ____ in the number ____. • 1 1/3 is between 1 and 2.The previous whole number is 1.The next whole number is 2. • When the numerator is a multiple of the denominator, the fraction is equivalent to a whole number.

[Previous, current and future learning objectives for fractions]

Year 4 – Statistics

Year 3 Vocabulary	Year 4 Vocabulary
No specific vocabulary – see previous year groups	No specific vocabulary – see previous year groups

Maths STEM sentemces:

- I drew ____ pictures because ____.
- I know each picture is worth ____ because ____.
- I know the greatest/smallest amount shown on the pictogram is ____ because ____.

[Previous, current and future year groups learning objectives for Statistics]()

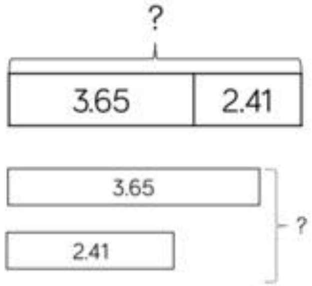
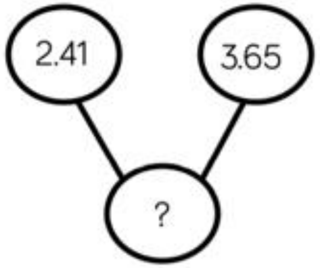
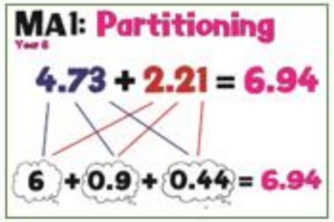
Year 5 – Place Value

Year 4 Vocabulary	Year 5 Vocabulary
Children should reason about place value, as in year 3, now extending to thousands. Children should build on their learning from year 3 to find the previous and next multiple of a thousand. round/ed /ing closest multiple data structure ('describe the structure' in relation to representations)	Children should reason about place value, as in year 4, now extending to ten thousands and thousands Children should build on their learning from year 3 to find the previous and next multiple of a ten thousand and hundred thousand, also the previous multiple of 0.1 and 0.01. Express hundredths in words, e.g. Three hundredths is equal to zero-point-zero-three.
<u>Maths STEM sentences:</u> • When I partition the number ___, there are ____hundred thousands, ____ ten thousands, ____ thousands, _____ hundred, ____ tens and ____ ones. • ____ = _____ + _____ + ______ + _____ • If I added one more ____ (thousand/hundred/ten/one) the number would become ____. • _____ is closest to 2500 because _____. • I know that _____ is ten/hundred/thousand more than ____. The ____ column changes. • I have ordered numbers this way because ____. • I know the next 3 numbers in the sequence would be ____. • There is no zero in roman numerals because ____. • When rounding to the nearest ____, we look at the ____ column. • ____ is between ____ and ____ but rounds to ____.	• Rounding to the nearest _____ is similar to rounding to the nearest _____ because _____. Rounding to the nearest _____ is different to rounding to the nearest _____ because ____. • A negative number is _____. • I know ____ (digits) can also be written as ____ (words). • 1 is 10 times the size of one-tenth. One-tenth is 10 times the size of one-hundredth. 1 is 100 times the size of one-hundredth. • 10 tenths is equal to 1 one. 10 hundredths is equal to 1 tenth. 100 hundredths is equal to 1 one. • 18 hundredths is equal to 10 hundredths and 8 more hundredths. 10 hundredths is equal to 1 tenth. So 18 hundredths is equal to 1 tenth and 8 more hundredths, which is 0.18. • a is 0.14 because it is 1 hundredth less than the midpoint of 0.1 and 0.2, which is 0.15. b is 0.41 because it is 1 hundredth more than 0.4.

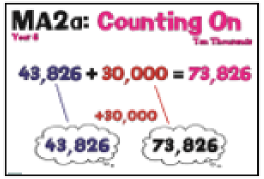
Year 5 – Addition

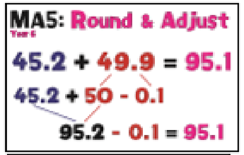
	Year 4	Year 5	Year 6
Mental calculations		Add and subtract numbers mentally with increasingly large numbers perform mental calculations, including with mixed operations and large numbers.	Add and subtract numbers mentally with increasingly large numbers perform mental calculations, including with mixed operations and large numbers.
Written calculations	Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate.	Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction).	

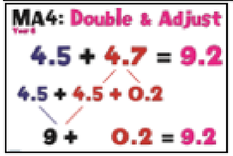
Previous, current and future learning objectives for addition

	Mental Strategies	Concrete	Pictorial	Abstract	Vocabulary	Models, Images and resources
Year 5 And Year 6	**Y5** Add numbers mentally with increasingly large numbers to aid fluency e.g. 12 462 + 2 300 = 14 762 Use rounding to check answers and determine, levels of accuracy Add a pair of two or three-digit 125 + 127 = 252 125 + 125 + 2 250 + 2 = 252 multiples of 10, e.g. 30 + 80, 35 +36 and 350+ 360 Add a near multiple of 10, 100 and 1000 to any two-digit, three-digit 345 + 298 = 643 345 + 300 - 2 645 - 2 = 643 4645 + 1996 = 6641 4645 + 2000 - 4 6645 - 4 = 6641	Use of place value counters to add up to 6 digits. 	Use of place value grid. See Y4 for some examples.  	Varied sized numbers up to millions or 3DP added using compact method. Includes measures and money  	Add Sum More than Total Altogether Plus Partition into hundred thousands, ten thousands, thousands, hundreds, tens and ones Count on Carry ten Carry 100 Carry 1000 Carry 10000 Carry 100000	100 square Number lines Number tracks Place Value Counters. Base ten (Diennes). Arrow Cards

<table>
<tr>
<td></td>
<td>number or four-digit number,
e.g. 235 + 198

Add pairs of decimal fractions each with units and tenths,
e.g. 5.7 + 2.5, 6.3 + 4.8
<u>Y6</u>
Calculate mentally with increasingly large numbers and more complex calculations. Including
Counting on in multiples


Addition facts for multiples of 10 to 1000 and decimal numbers with one decimal place,
e.g.
650 + __ = 930
___ + 1.4 = 2.5


Know the related


vocabulary for addition
See the images from Y4.</td>
<td></td>
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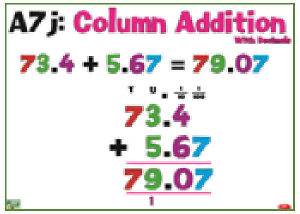
<td>Decimals - same and different number of digits


</td>
<td>Two digit
three digit

Crossing tens boundary

Inverse

addend</td>
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</tr>
</table>

Year 5 – Addition

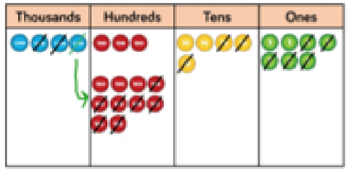
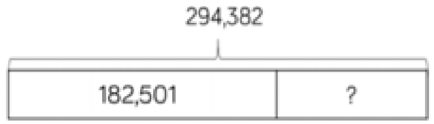
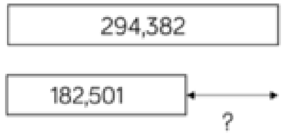
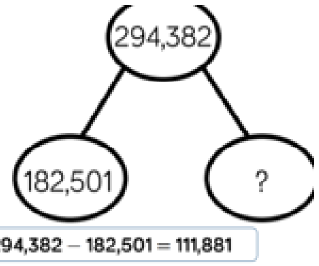
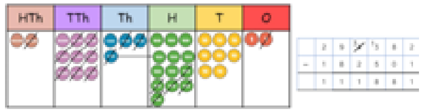
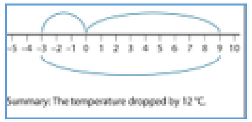
Year 4 Vocabulary	Year 5 Vocabulary
See previous year groups.	See previous year groups.

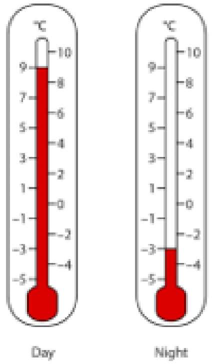
Maths STEM sentences:

- Write a story for the calculation 5000 + 4000 = 9000.
- 452 + 4 thousand = _____
- ____ is greater than/less than/</>/= _____
- I know _____ could be the right/wrong answer because ____.
- I know the inverse of addition is _____ because ____.
- I can exchange 10 ones for 1 ten because ______
- I can exchange 10 tens for 1 hundred because ________
- I can exchange 10 hundreds for 1 thousand because _______
- I can exchange 10 thousands etc…
- I know that exchange means ____.

Year 5 – Subtraction

	Year 4	Year 5	Year 6
Mental calculations		Add and subtract numbers mentally with increasingly large numbers perform mental calculations, including with mixed operations and large numbers.	Add and subtract numbers mentally with increasingly large numbers perform mental calculations, including with mixed operations and large numbers.
Written calculations	Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate.	Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction).	
[Previous, current and future learning objectives for subtraction]			

	Mental Strategies	Concrete	Pictorial	Abstract	Vocabulary	Models, Images and resources
Year 5 And Year 6	Subtract numbers with increasingly large numbers to aid fluency e.g. 12 462 - 2 300 = 10 162 Use rounding to check answers and determine, levels of accuracy Subtract a pair of two or three-digit multiples of 10, e.g. 80 - 30, 45 -36 and 450 – 360 Subtract a near multiple of 10 or 100 from any two-digit or three-digit number, e.g. 235 - 199 Subtract pairs of decimal fractions each with ones and tenths, $12.4 - 5.97 = 6.43$ e.g. 5.7 - 2.5, 6.3 -4.8	Subtract whole numbers with more than 4 digits and increasingly large numbers using efficient column written methods with decomposition to aid fluency Please see the Year 3 and Year 4 examples as they have the same principles  $4357 - 2735 = 1622$	Subtract whole numbers with more than 4 digits and increasingly large numbers using efficient column written methods with decomposition to aid fluency Please see the Year 3 and Year 4 examples as they have the same principles    	Subtract whole numbers with more than 4 digits and increasingly large numbers using efficient column written methods with decomposition to aid fluency Please see the Year 3 and Year 4 examples as they have the same principles Negative numbers 7 – 9 = -2 There is a negative difference of 2 The difference between 9 and -3. 	Subtraction Partition into millions, hundred thousands, ten thousands, thousands, hundreds, tens and ones Empty number line Count on Carry back First, Then Now Difference Find the difference Decrease / reduced by Negative	100 square Number lines Number tracks Place Value Count Base ten. Arrow Cards

	See Y3 missing subtrahend and addend problems.		[Negative numbers](#) Negative numbers represent change 9 – 12 = -3 *'The temperature was 9 °C in the day, then it dropped to −3 °C at night. What was the change in temperature?'*  			

Year 5 – Subtraction

Year 4 Vocabulary	Year 5 Vocabulary
See previous year groups	See previous year groups

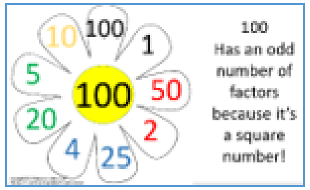
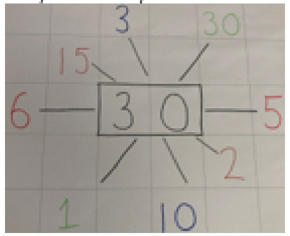
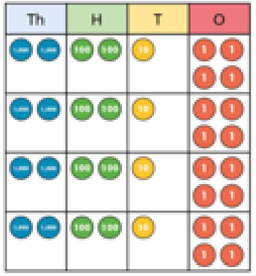
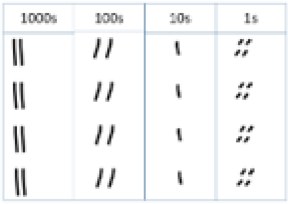
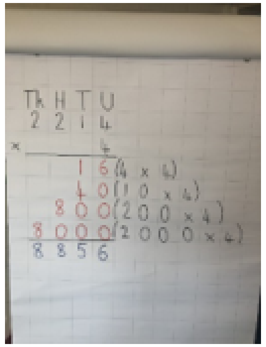
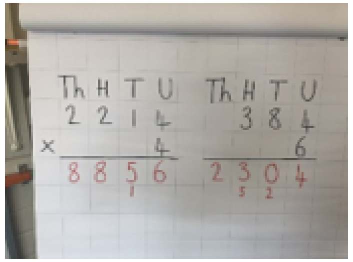
Maths STEM sentences:

- Write a story for the calculation 5000 + 4000 = 9000.
- Always, sometimes, never? When you add hundreds to a number it affects the thousands column.
- 452 + 4 thousand = _____
- ____ is greater than/less than/</>/= _____
- I know that when I subtract a smaller number it ____.
- I know _____ could be the right/wrong answer because ____.
- I know the inverse of addition is _____ because ____.
- I can exchange 10 ones for 1 ten because ______
- I can exchange 10 tens for 1 hundred because ________
- I can exchange 10 hundreds for 1 thousand because _________
- 8 plus 6 is equal to 14, so 8 hundreds plus 6 hundreds is equal to 14 hundreds.14 hundred is equal to 1,400.

Year 5 – Multiplication

	Year 4	Year 5	Year 6
Multiplication and division facts	Count in multiples of 6, 7, 9, 25 and 1000 Recall multiplication and division facts for multiplication tables up to 12 × 12	Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 (copied from Number and Place Value)	
Mental calculations	Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers	Multiply and divide numbers mentally drawing upon known facts	Perform mental calculations, including with mixed operations and large numbers.
Written calculations	Multiply two-digit and three-digit numbers by a one-digit number using formal written layout	Multiply numbers up to 4 digits by a one-or two-digit number using a formal written method, including long multiplication for two-digit numbers Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context.	Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication.

[Previous, current and future learning objectives for multiplication]

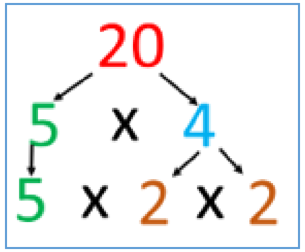
	Mental Strategies	Concrete	Pictorial	Abstract	Vocabulary	Models, Images and resources
Year 5 and 6	Multiply TU X U mentally using known facts for all multiplication tables to 12 x 12 numbers  Identify multiples and factors, including finding all factor pairs for numbers to 100, e.g. 30 has the factor pairs 1 × 30, 2 × 15, 3 × 10 and 5 × 6  Establish whether a number up to 100 is prime and recall prime numbers up to 19 Recognise and use square and cube numbers, and relevant notation.	**Multiply up to 4 digits by a one- number** 2214 x 4 – use counters  **Multiply up to 4 digits by a two- number** If children are working at this level – moving straight to a formal method is the best approach.	**Multiply up to 4 digits by a one- number** 2214 x 4 – can draw in a place value grid  **Multiply up to 4 digits by a two- number** If children are working at this level – moving straight to a formal method is the best approach.	**Multiply up to 4 digits by a one- number** **Year 5** **Start with expanded with brackets:**  **Then move on to compact method showing bridging:** 	As above factor product multiple ten times the size hundred times the size a tenth the size a hundredth the size scaling adjacent multiples prime square cubed	100 square Number lines Number tracks Tens Frame Numicon Place Value Counters Base ten (Diennes). Arrow Cards Gattegno chart Place Value Grid

Multiply by 25 or 50, e.g. 48 × 25, 32 × 50
Multiply whole numbers decimals by 10, 100 and 1000 e.g. 4.3 × 10, 0.75 × 100

Multiply pairs of multiples of 10, e.g. 60 × 30, and a multiple of 100 by a single digit number, e.g. 900 × 8

$$30 \times 80 = 3 \times 8 \times 10 \times 10$$
$$= 3 \times 8 \times 100$$
$$= 2{,}400$$

Use divisibility tests to identify multiples of 3, 6, 9 8 and revise 2, 4, 10 and 5

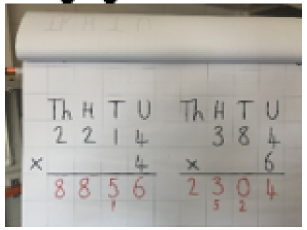


Express a product as a multiple of three factors

Year 6
Multiply two-digit decimals such as 0.8 × 7 and pairs of multiples of 10 and 100, e.g. 50 × 30, 600 × 20

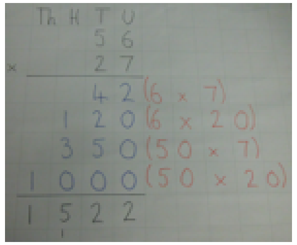
Year 6

Start with compact method showing bridging:

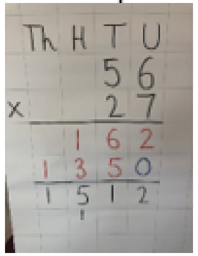


Multiply up to 4 digits by a two- number

First, use the expanded method



Use compact method:



Year 5 – Multiplication

Year 4 Vocabulary	Year 5 Vocabulary
Children should be able to use this vocabulary to reason: 'If I multiply the dividend by 100, and the divisor by 100 the quotient remains the same.' 'If we swap the values of the divisor and the quotient, the dividend remains the same.' Children should be able to reason about calculation: 'Explain what mistake x has made.'	'Factor' and 'Product' with the additional focus of multiplying by 100, e.g. 'If I make one factor one hundred times larger, I make the product one hundred times larger.' '8, made one-tenth of the size, is 0.8' '8 divided by 10 is equal to 0.8' 'First we had 8 ones. Now we have 8 tenths' 'Term' – e.g. 'x 100' '÷ 100' Short division Common factors Common multiples Quantity Combined

Maths STEM sentences:

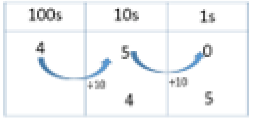
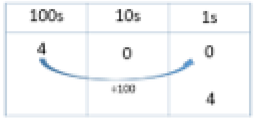
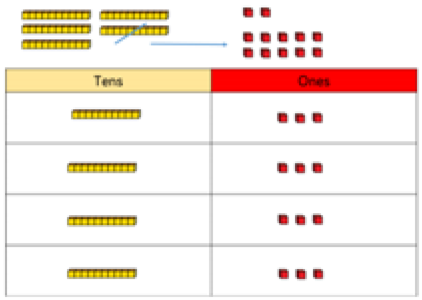
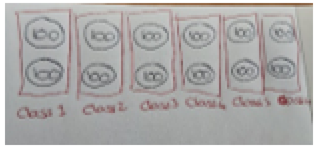
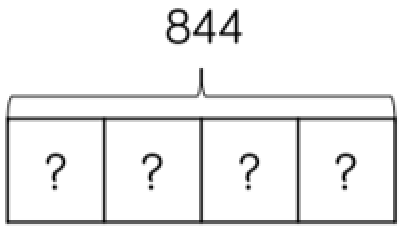
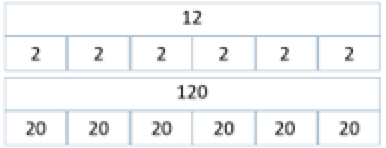
- There are ___ equal groups with ____ in each group.
- I know the total is ____ because ____.
- ___ x ____ = ____ x ____. Prove it.
- I know that when I times by 4, I need to ____ to times by 8.
- I know inverse means ____.
- I know the rule to multiplying/divide by 10/100/1000 is _____.
- I know I will produce a greater number if I multiply by 100 rather than 10 because ____.
- I know that zero means ____.
- I know that grouping/sharing mean _____. My example is ____.
- ____ is a factor of _____.
- I know a common factor/multiple/prime number is ____ and an example of this is ____.
- I know to square/cube a number you need to ____ and this can be written as ____.
- If I make the dividend one-hundredth times the size and the divisor one-hundredth times the size, the quotient remains the same. If I make the dividend one-hundredth times the size and keep the divisor the same, I must make the quotient one-hundredth times the size.
- 0.8, made 10 times the size, is 8. 0.8 multiplied by 10 is equal to 8. First we had 8 tenths. Now we have 8 ones.

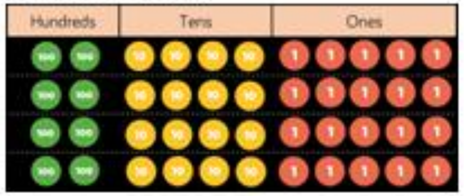
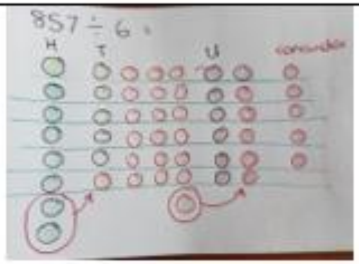
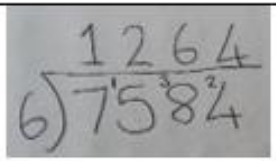
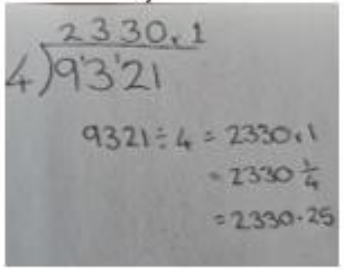
Year 5 – Division

	Year 4	Year 5	Year 6
Multiplication and division facts	Count in multiples of 6, 7, 9, 25 and 1000 Recall multiplication and division facts for multiplication tables up to 12 × 12	Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 (copied from Number and Place Value)	
Mental calculations	Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers	Multiply and divide numbers mentally drawing upon known facts	Perform mental calculations, including with mixed operations and large numbers.
Written calculations	Multiply two-digit and three-digit numbers by a one-digit number using formal written layout	Multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context	Divide numbers up to 4-digits by a two-digit whole number using the formal written method of short division where appropriate for the context divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context

Previous, current and future learning objectives for division

Year 4 and Year 5 Division

	Mental Strategies	Concrete	Pictorial	Abstract	Vocabulary	Models, Images and resources
Year 4 **Year 5**	Divide numbers mentally using known facts for all multiplication tables to 12 x 12 Practise and extend mental methods to three-digit numbers to derive facts e.g. 200 × 3 = 600 into 600 ÷ 3 = 200 Divide multiples of 10 up to 1000 by 10 E.g. 120 ÷ 10  Divide multiples of 100 up to 10, 000 by 100 e.g. 600 ÷ 100 or 2800 ÷ 100  Find halves of multiples of 10, even numbers to 200 and	**Variation/related number facts** E.g. 1200 pencils shared between 6 classes  **52 ÷ 4 =**  **Year 4 - 3-digit number divided by 1-digit (Short division) using**	**Variation/related number facts** E.g. 1200 pencils shared between 6 classes   **Year 4 - 3-digit number divided by 1-digit (Short division) using all times table facts and including reminders** **Year 5 - 4-digit number divided by 1-digit (Short division) using all times table facts and including reminders** **857 ÷ 6 = 142r5**	**Variation/related number facts** E.g. 1200 pencils shared between 6 classes  **Year 4 - 3-digit number divided by 1-digit (Short division) using all times table facts and including reminders** **Year 5 - 4-digit number divided by 1-digit (Short division) using all times table facts and including reminders** £705 shared between five using short division layout $\begin{array}{r} 1\ \cdot\ 1 \\ 5\overline{)7\,{}^{2}0\ \ 5} \end{array}$	Divide Share equally, one each, two each…, Grouping equal groups, how many lots of, groups of… half of halved symbol ÷ Remainder Left over Repeated subtraction	100 square Number lines Number tracks Tens Frame Place Value Counters Base ten (Dienes) Arrow Cards Gattegno chart Place Value Grid

	three-digit multiples of 10 to 500 e.g. 760 ÷ 2	**all times table facts and including reminders** **Year 5 - 4-digit number divided by 1-digit (Short division) using all times table facts and including reminders** **980 ÷ 5 = 245**  **376 ÷ 3 = 122r1** 		 Year 5 to also interpret that remainder as a fraction or simple decimal (if known decimal fact). 	a tenth or hundredth of the size Fraction Decimals	

Year 5 – Division

Year 4 Vocabulary	Year 5 Vocabulary
dividend divisor quotient remainder	‘Factor’ and ‘Product’ with the additional focus of multiplying by 100, e.g. ‘If I make one factor one hundred times larger, I make the product one hundred times larger.’ ‘8, made one-tenth of the size, is 0.8’ ‘8 divided by 10 is equal to 0.8’ ‘First we had 8 ones. Now we have 8 tenths’ ‘Term’ – e.g. ‘x 100’ ‘÷ 100’ Short division Common factors Common multiples Quantity Combined

Maths STEM sentences:

- There are ___ equal groups with ____ in each group.
- I know the total is ____ because ____.
- ___ x ____ = ____ ÷ ____. Prove it.
- ___ x ____ = ____ x ____. Prove it.
- *7 groups of 8 go into 56*.
- I know that when I times by 4, I need to ____ to times by 8.
- I know the inverse of multiplication is _____ because ____.
- I know the rule to multiplying/divide by 10/100 is _____.
- How many different ways can you find the make 30? The method I used was ____.
- I know I will produce a greater number if I multiply by 100 rather than 10 because ____.
- I know that zero means ____.
- I know that grouping/sharing mean _____. My example is ____.
- ____ is a factor of _____.
- If the dividend is a multiple of the divisor there is no remainder. If the dividend is not a multiple of the divisor, there i s a remainder. The remainder is always less than the divisor.
- If we swap the values of the divisor and quotient, the dividend remains the same.

Year 5 – Shape

Year 4 Vocabulary	Year 5 Vocabulary
polygon translate/translated/ translation x axis y axis co-ordinates interior angles ‘drawn to scale/ not drawn to scale’ symmetrical pattern	Acute angle Obtuse angle Reflex angle Area

Maths STEM sentences:

- This shape could be ___ because ___.
- ____ is the odd one out because ____.
- Vertical/reflect means means ______.
- The next shape in the pattern will be ____ because _____.
- I know that a ____ has edges/faces/sides because _____.
- ____ angle is bigger/smaller than a ____ angle.
- An ____ angle is ___ degrees.

[Previous, current and future learning objectives for properties of shape]

[Previous, current and future learning objectives for position and direction]

Year 5 – Measures

Year 4 Vocabulary	Year 5 Vocabulary
Kilometre rectilinear shapes	metric units common imperial units Inches Pounds pints

Maths STEM sentences:

- 1m = ____ cm because _____
- 1 cm = ____ mm because ____.
- 565cm + 10 cm ____ 565cm – 10 cm. (longer than, shorter than, the same as, <, > or =)
- The ____ is ____ cm longer than the ____.
- The next shapes were _____.
- To find the perimeter/area, I ______.
- I know the formula for area is _____ x ____.
- I know that if I have a compound shape I need to _____ to work out the area.
- The _____ shape has the longest perimeter because ____.
- The area of the shape is _____ squared centimetres or ____cm^2.

[Previous, current and future learning objectives for measures]

Year 5 – Fractions

Year 4 Vocabulary	Year 5 Vocabulary
Previous whole number, next whole number Mixed number Equivalent Improper fraction	‘1 is 10 times the size the one-tenth.’ ‘One-tenth is 10 times the size of one-hundredth.’ ‘1 is 100 times the size of one-hundredth’ ’10 tenths is equal to 1 one.’ ’10 hundredths is equal to 1 tenth.’ ‘100 hundredths is equal to 1 one.’ Hundredth more/less Midpoint (e.g. a is 0.14 because it is 1 hundredths less than the midpoint of 0.1 and 0.2, which is 0.15.’) Unit fraction Decimal fraction ‘Chain of equivalent fractions’,

Maths STEM sentences:

- I know a whole has ____ parts. Each part is worth a ____. This is the same as 1/8.
- I know that ____ of the shape is shaded because ____.
- I know that I have found a fifth of something because ____.
- ____ is equal to ____. I know this because ____
- I know that the fraction ____ has been shaded because _____
- I know ____ hundredths are shaded because ____.
- I know that I need ____ hundredths to make a whole/tenths.
- When I am writing hundredths, the ____ is always. (denominator)
- If I start at _____ hundredths, ____ will be next.
- I know that the ____ hundredths comes between ___ and ___.
- I know equivalent means ____.
- The numerator/denominator is _____ and means ____.

- I know that a decimal is ____.
- I know that 0.1 metres is ____ in centimetres.
- I know that a zero is important when dividing a number by 10 because _____.
- When I partition the number ___, there are ____ ones, _____ tenths, and ____ hundredths
- ____ = _____ + _____ + ______ + _____ (with decimal places).
- I know the value of the ____ in the number ____.
- I know an improper fraction/mixed number is ____. I can provide an example ____. I can convert between them by ____.
- I know you need ____ to simplify fractions/find equivalent fractions.
- I know to add/subtract/multiply a fraction, I have to ____.
- To find a fraction of an amount, I know you need to divide by ____ and multiply by ____.
- I know that to convert a decimal to a percentage I _____.
- ____ (percentage) = _____ (fraction) = _____ (decimal)
- Percent means _____

[Previous, current and future learning objectives for fractions]

Year 5 – Statistics

Year 4 Vocabulary	Year 5 Vocabulary
No specific vocabulary – see previous year groups.	No specific vocabulary – see previous year groups.

Maths STEM sentemces:

- I know the ____ axis is ____.
- I know the scale goes up in ____. I worked this out by ____.
- I know that a column/row in a timetable shows ____.

Previous, current and future year groups learning objectives for Statistics

Year 6 – Place Value

Year 6 Vocabulary

Children should reason about place value, as in year 5, now extending to ten hundred thousands and millions.

Intervals
Divisions
Numerals
Powers of ten
Ascending/ descending order
Sequence
Degree of accuracy
comparing

Year 7 Vocabulary

Use conventional notation for the priority of operations, including brackets, powers, roots and reciprocals.
Real numbers
Rational numbers.

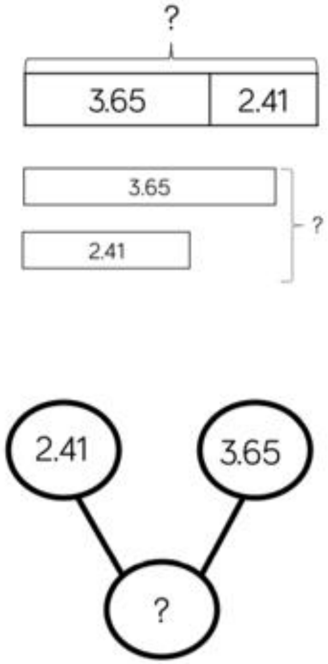
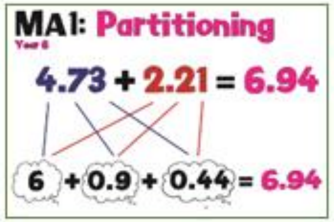
Maths STEM sentences:

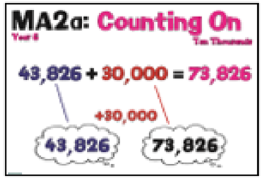
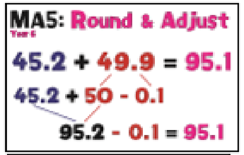
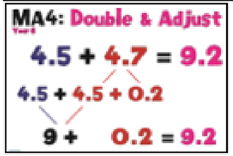
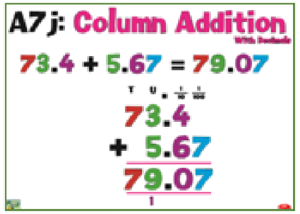
- When I partition the number ___, there are ____ millions, ____hundred thousands, ____ ten thousands, ____ thousands, _____ hundred, ____ tens and ____ ones.
- ____ = _____ + _____ + ______ + _____
- If I added one more ____ (thousand/hundred/ten/one) the number would become ____.
- _____ is closest to 2500 because _____.
- I know that _____ is ten/hundred/thousand more than ____. The ____ column changes.
- I have ordered numbers this way because ____.
- I know the next 3 numbers in the sequence would be ____ because __________.
- There is no zero in roman numerals because ____.

- When rounding to the nearest ____, we look at the ____ column.
- ____ is between ____ and ____ but rounds to ____.
- Rounding to the nearest _____ is similar to rounding to the nearest _____ because _____. Rounding to the nearest _____ is different to rounding to the nearest _____ because ____.
- A negative number is _____.
- I know ____ (digits) can also be written as ____ (words).
- 10 hundred-thousands is equal to 1 million.
- 1,000,000 is 10 times the size of 100,000. 100,000 is one-tenth times the size of 1,000,000.
- The previous multiple of 100,000 is ________. The next multiple of 100,000 is ________.
- The previous multiple of 1 million is _____ million. The next multiple of 1 million is ____ million.

Year 6 – Addition

	Year 5	Year 6	Year 7
Mental calculations	Add and subtract numbers mentally with increasingly large numbers perform mental calculations, including with mixed operations and large numbers.	Add and subtract numbers mentally with increasingly large numbers perform mental calculations, including with mixed operations and large numbers.	
Written calculations	Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction).		
Previous, current and future learning objectives for addition			

	Mental Strategies	Concrete	Pictorial	Abstract	Vocabulary	Models, Images and resources
Year 5 And Year 6	**Y5** Add numbers mentally with increasingly large numbers to aid fluency e.g. 12 462 + 2 300 = 14 762 Use rounding to check answers and determine, levels of accuracy Add a pair of two or three-digit 125 + 127 = 252 125 + 125 + 2 250 + 2 = 252 multiples of 10, e.g. 30 + 80, 35 +36 and 350+ 360 Add a near multiple of 10, 100 and 1000 to any two-digit, three-digit 345 + 298 = 643 345 + 300 - 2 645 - 2 = 643 4645 + 1996 = 6641 4645 + 2000 - 4 6645 - 4 = 6641	Use of place value counters to add up to 6 digits. 	Use of place value grid. See Y4 for some examples. 	Varied sized numbers up to millions or 3DP added using compact method. Includes measures and money  	Add Sum More than Total Altogether Plus Partition into hundred thousands, ten thousands, thousands, hundreds, tens and ones Count on Carry ten Carry 100 Carry 1000 Carry 10000 Carry 100000	100 square Number lines Number tracks Place Value Counters. Base ten (Diennes). Arrow Cards

	number or four-digit number, e.g. 235 + 198 Add pairs of decimal fractions each with units and tenths, e.g. 5.7 + 2.5, 6.3 + 4.8 **<u>Y6</u>** Calculate mentally with increasingly large numbers and more complex calculations. Including Counting on in multiples  Addition facts for multiples of 10 to 1000 and decimal numbers with one decimal place, e.g. 650 + __ = 930 ___ + 1.4 = 2.5  Know the related  vocabulary for addition See the images from Y4.			Decimals - same and different number of digits  	Two digit three digit Crossing tens boundary Inverse addend	

Year 6 – Addition

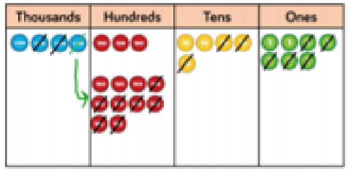
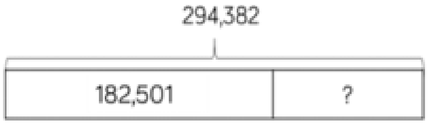
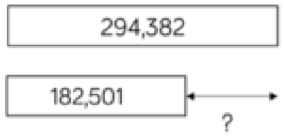
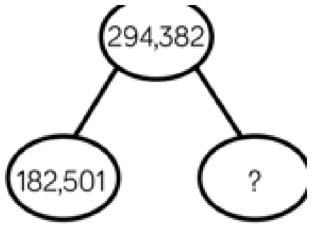
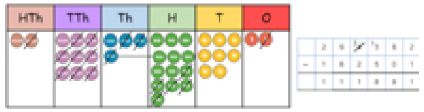
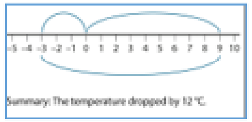
Year 5 Vocabulary	Year 6 Vocabulary
See previous year groups.	See previous year groups.

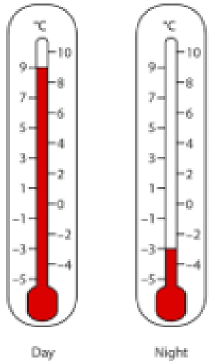
Maths STEM sentences:

- Write a story for the calculation 5000 + 4000 = 9000.
- 452 + 4 thousand = _____
- ____ is greater than/less than/</>/= _____
- I know _____ could be the right/wrong answer because ____.
- I know the inverse of addition is _____ because ____.
- I know that exchange means ____.
- I can exchange 10 ones for 1 ten because ______
- I can exchange 10 tens for 1 hundred because ________
- I can exchange 10 hundreds for 1 thousand because _________
- I can exchange 10 thousands, etc…
- If one addend is increased and the other is decreased by the same amount, the sum stays the same.

Year 6 – Subtraction

	Year 5	Year 6	Year 7
Mental calculations	Add and subtract numbers mentally with increasingly large numbers perform mental calculations, including with mixed operations and large numbers.	Add and subtract numbers mentally with increasingly large numbers perform mental calculations, including with mixed operations and large numbers.	
Written calculations	Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction).		
Previous, current and future learning objectives for addition			

	Mental Strategies	Concrete	Pictorial	Abstract	Vocabulary	Models, Images and resources
Year 5 And Year 6	Subtract numbers with increasingly large numbers to aid fluency e.g. 12 462 - 2 300 = 10 162 Use rounding to check answers and determine, levels of accuracy Subtract a pair of two or three-digit multiples of 10, e.g. 80 - 30, 45 -36 and 450 – 360 Subtract a near multiple of 10 or 100 from any two-digit or three-digit number, e.g. 235 - 199 Subtract pairs of decimal fractions each with ones and tenths, 12.4 - 5.97 = 6.43 $\cancel{1}2.\cancel{4}0$ - 5.97 6.43 e.g. 5.7 - 2.5, 6.3 -4.8	Subtract whole numbers with more than 4 digits and increasingly large numbers using efficient column written methods with decomposition to aid fluency Please see the Year 3 and Year 4 examples as they have the same principles  $\cancel{4}357$ – 2735 1622	Subtract whole numbers with more than 4 digits and increasingly large numbers using efficient column written methods with decomposition to aid fluency Please see the Year 3 and Year 4 examples as they have the same principles    294,382 – 182,501 = 111,881  	Subtract whole numbers with more than 4 digits and increasingly large numbers using efficient column written methods with decomposition to aid fluency Please see the Year 3 and Year 4 examples as they have the same principles Negative numbers 7 – 9 = -2 There is a negative difference of 2 The difference between 9 and -3.  	Subtraction Partition into millions, hundred thousands, ten thousands, thousands, hundreds, tens and ones Empty number line Count on Carry back First, Then Now Difference Find the difference Decrease / reduced by Negative	100 square Number lines Number tracks Place Value Count Base ten. Arrow Cards

	See Y3 missing subtrahend and addend problems.		Negative numbers Negative numbers represent change 9 – 12 = -3 'The temperature was 9 °C in the day, then it dropped to −3 °C at night. What was the change in temperature?'  			

Year 6 – Subtraction

Year 5 Vocabulary	Year 6 Vocabulary
See previous year groups	See previous year groups

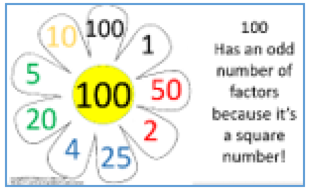
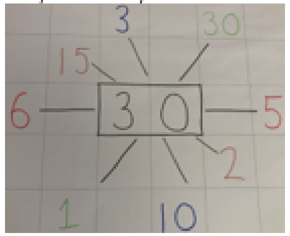
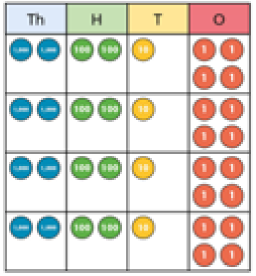
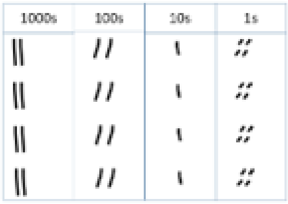
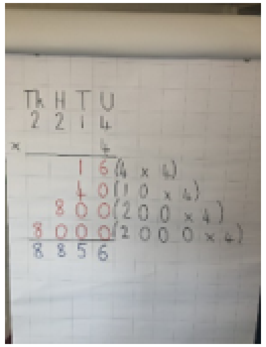
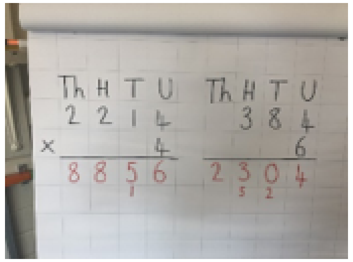
<u>Maths STEM sentences:</u>

- ____ is greater than/less than/</>/= _____
- I know _____ could be the right/wrong answer because ____.
- I know the inverse of addition is _____ because ____.
- I know that exchange means ____.
- I can exchange 10 ones for 1 ten because ______
- I can exchange 10 tens for 1 hundred because ________
- I can exchange 10 hundreds for 1 thousand because _________
- I can exchange 10 thousands, etc…
- If one addend is increased and the other is decreased by the same amount, the sum stays the same.

Year 6 – Multiplication

	Year 5	Year 6	Year 7
Multiplication and division facts	Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 (copied from Number and Place Value)		
Mental calculations	Multiply and divide numbers mentally drawing upon known facts	Perform mental calculations, including with mixed operations and large numbers.	
Written calculations	Multiply numbers up to 4 digits by a one-or two-digit number using a formal written method, including long multiplication for two-digit numbers Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context.	Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication.	

Previous, current and future learning objectives for multiplication

	Mental Strategies	Concrete	Pictorial	Abstract	Vocabulary	Models, Images and resources
Year 5 and 6	Multiply TU X U mentally using known facts for all multiplication tables to 12 x 12 numbers  Identify multiples and factors, including finding all factor pairs for numbers to 100, e.g. 30 has the factor pairs 1 × 30, 2 × 15, 3 × 10 and 5 × 6  Establish whether a number up to 100 is prime and recall prime numbers up to 19 Recognise and use square and cube numbers, and relevant notation.	**Multiply up to 4 digits by a one- number** 2214 x 4 – use counters  **Multiply up to 4 digits by a two- number** If children are working at this level – moving straight to a formal method is the best approach.	**Multiply up to 4 digits by a one- number** 2214 x 4 – can draw in a place value grid  **Multiply up to 4 digits by a two- number** If children are working at this level – moving straight to a formal method is the best approach.	**Multiply up to 4 digits by a one- number** **Year 5** **Start with expanded with brackets:**  **Then move on to compact method showing bridging:** 	As above factor product multiple ten times the size hundred times the size a tenth the size a hundredth the size scaling adjacent multiples prime square cubed	100 square Number lines Number tracks Tens Frame Numicon Place Value Counters Base ten (Diennes). Arrow Cards Gattegno chart Place Value Grid

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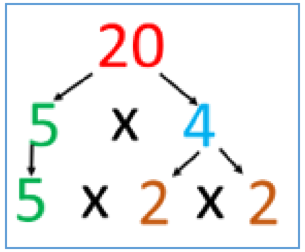
Multiply by 25 or 50, e.g. 48 × 25, 32 × 50
Multiply whole numbers decimals by 10, 100 and 1000 e.g. 4.3 × 10, 0.75 × 100

Multiply pairs of multiples of 10, e.g. 60 × 30, and a multiple of 100 by a single digit number, e.g. 900 × 8

30 × 80 = 3 × 8 × 10 × 10
= 3 × 8 × 100
= 2,400

Use divisibility tests to identify multiples of 3, 6, 9 8 and revise 2, 4, 10 and 5



Express a product as a multiple of three factors

<u>Year 6</u>
Multiply two-digit decimals such as 0.8 × 7 and pairs of multiples of 10 and 100, e.g. 50 × 30, 600 × 20

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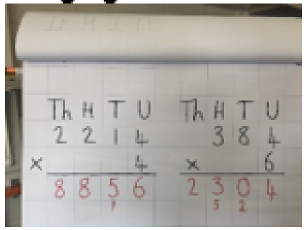
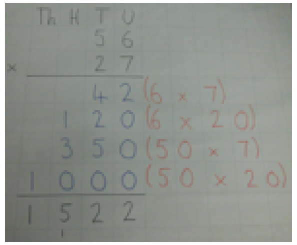
<u>Year 6</u>

Start with compact method showing bridging:

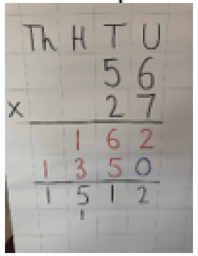


<u>Multiply up to 4 digits by a two- number</u>

First, use the expanded method



Use compact method:



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Year 6 – Multiplication

Year 5 Vocabulary	Year 6 Vocabulary
'Factor' and 'Product' with the additional focus of multiplying by 100, e.g. 'If I make one factor one hundred times larger, I make the product one hundred times larger.' '8, made one-tenth of the size, is 0.8' '8 divided by 10 is equal to 0.8' 'First we had 8 ones. Now we have 8 tenths' 'Term' – e.g. 'x 100' '÷ 100' Short division Common factors Common multiples Quantity Combined	**Emphasis on multiplicative and proportional structures:** Children should be able to reason using 1-to-many correspondence structures: 'For every 2 green beads, there are 3 yellow beads.' 'For every 1 cup of rice you cook, you need 2 cups of water.' Cubed.

Maths STEM sentences:

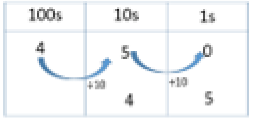
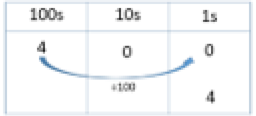
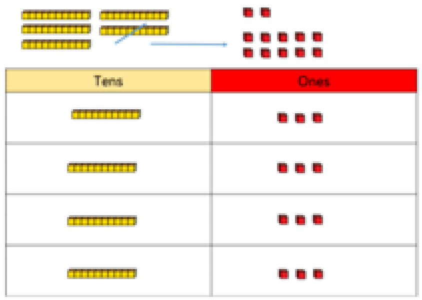
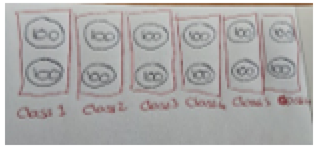
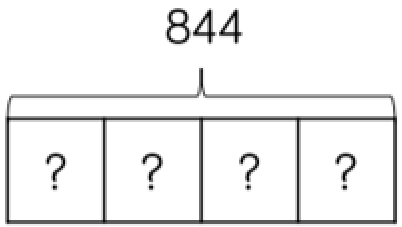
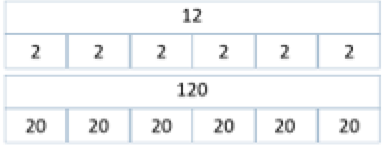
- There are ___ equal groups with ____ in each group.
- I know the total is ____ because ____.
- ___ x ____ = ____ ÷ ____. Prove it.
- ___ x ____ = ____ x ____. Prove it.
- I know that when I times by 4, I need to ____ to times by 8.
- I know inverse means ____.
- I know the rule to multiplying/divide by 10/100/1000 is _____.
- I know I will produce a greater number if I multiply by 100 rather than 10 because ____.
- I know that zero means ____.
- I know that grouping/sharing mean _____. My example is ____.
- ____ is a factor of _____.
- I know a common factor/multiple/prime number is ____ and an example of this is ____.
- I know to square/cube a number you need to ____ and this can be written as ____.
- The relationship between 2 numbers can be expressed additively or multiplicatively.

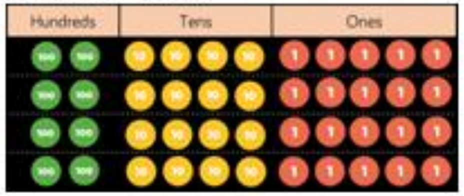
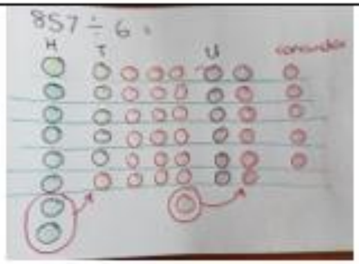
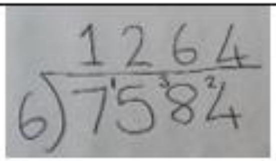
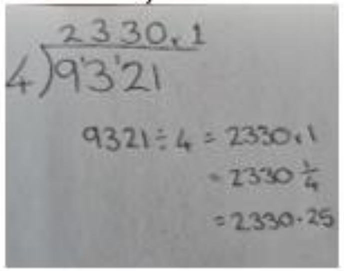
Year 6 – Division

	Year 5	Year 6	Year 7
Multiplication and division facts	Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 (copied from Number and Place Value)		
Mental calculations	Multiply and divide numbers mentally drawing upon known facts	Perform mental calculations, including with mixed operations and large numbers.	
Written calculations	Multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context	Divide numbers up to 4-digits by a two-digit whole number using the formal written method of short division where appropriate for the context divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context	

Previous, current and future learning objectives for division

Year 4 and Year 5 Division

	Mental Strategies	Concrete	Pictorial	Abstract	Vocabulary	Models, Images and resources
Year 4 **Year 5**	Divide numbers mentally using known facts for all multiplication tables to 12 x 12 Practise and extend mental methods to three-digit numbers to derive facts e.g. 200 × 3 = 600 into 600 ÷ 3 = 200 Divide multiples of 10 up to 1000 by 10 E.g. 120 ÷ 10  Divide multiples of 100 up to 10, 000 by 100 e.g. 600 ÷ 100 or 2800 ÷ 100  Find halves of multiples of 10, even numbers to 200 and	**Variation/related number facts** E.g. 1200 pencils shared between 6 classes  **52 ÷ 4 =**  **Year 4 - 3-digit number divided by 1-digit (Short division) using**	**Variation/related number facts** E.g. 1200 pencils shared between 6 classes   **Year 4 - 3-digit number divided by 1-digit (Short division) using all times table facts and including reminders** **Year 5 - 4-digit number divided by 1-digit (Short division) using all times table facts and including reminders** **857 ÷ 6 = 142r5**	**Variation/related number facts** E.g. 1200 pencils shared between 6 classes  **Year 4 - 3-digit number divided by 1-digit (Short division) using all times table facts and including reminders** **Year 5 - 4-digit number divided by 1-digit (Short division) using all times table facts and including reminders** £705 shared between five using short division layout $\begin{array}{r} 1\ \ \cdot\ \ 1 \\ 5\overline{)7\,{}^{2}0\ \ 5} \end{array}$	Divide Share equally, one each, two each…, Grouping equal groups, how many lots of, groups of… half of halved symbol ÷ Remainder Left over Repeated subtraction	100 square Number lines Number tracks Tens Frame Place Value Counters Base ten (Dienes) Arrow Cards Gattegno chart Place Value Grid

	three-digit multiples of 10 to 500 e.g. 760 ÷ 2	**<u>all times table facts and including reminders</u>** **<u>Year 5 - 4-digit number divided by 1-digit (Short division) using all times table facts and including reminders</u>** **980 ÷ 5 = 245**  **376 ÷ 3 = 122r1** 		 Year 5 to also interpret that remainder as a fraction or simple decimal (if known decimal fact). 	a tenth or hundredth of the size Fraction Decimals	

Year 6 – Division

Year 5 Vocabulary	Year 6 Vocabulary
‘Factor’ and ‘Product’ with the additional focus of multiplying by 100, e.g. ‘If I make one factor one hundred times larger, I make the product one hundred times larger.’ ‘8, made one-tenth of the size, is 0.8’ ‘8 divided by 10 is equal to 0.8’ ‘First we had 8 ones. Now we have 8 tenths’ ‘Term’ – e.g. ‘x 100’ ‘÷ 100’ Short division Common factors Common multiples Quantity Combined	**Emphasis on multiplicative and proportional structures:** Children should be able to reason using 1-to-many correspondence structures: ‘For every 2 green beads, there are 3 yellow beads.’ ‘For every 1 cup of rice you cook, you need 2 cups of water.’ cubed

Maths STEM sentences:

- There are ___ equal groups with ____ in each group.
- I know the total is ____ because ____.
- ___ x ____ = ____ ÷ ____. Prove it.
- ___ x ____ = ____ x ____. Prove it.
- I know that when I times by 4, I need to ____ to times by 8.
- I know inverse means ____.
- I know the rule to multiplying/divide by 10/100/1000 is _____.
- I know I will produce a greater number if I multiply by 100 rather than 10 because ____.
- I know that zero means ____.
- I know that grouping/sharing mean _____. My example is ____.
- ____ is a factor of _____.
- I know a common factor/multiple/prime number is ____ and an example of this is ____.
- I know to square/cube a number you need to ____ and this can be written as ____.
- The relationship between 2 numbers can be expressed additively or multiplicatively.

Year 5 – Shape

Year 4 Vocabulary	Year 5 Vocabulary
polygon translate/translated/ translation x axis y axis co-ordinates interior angles 'drawn to scale/ not drawn to scale' symmetrical pattern	Acute angle Obtuse angle Reflex angle Area

Maths STEM sentences:

- This shape could be ___ because ___.
- ____ is the odd one out because ____.
- Vertical/reflect means means ______.
- The next shape in the pattern will be ____ because _____.
- I know that a ____ has edges/faces/sides because _____.
- ____ angle is bigger/smaller than a ____ angle.
- An ____ angle is ___ degrees.

Previous, current and future learning objectives for properties of shape

Previous, current and future learning objectives for position and direction

Year 5 – Measures

Year 4 Vocabulary	Year 5 Vocabulary
Kilometre rectilinear shapes	metric units common imperial units Inches Pounds pints

Maths STEM sentences:

- 1m = ____ cm because _____
- 1 cm = ____ mm because ____.
- 565cm + 10 cm ____ 565cm – 10 cm. (longer than, shorter than, the same as, <, > or =)
- The ____ is ____ cm longer than the ____.
- The next shapes were _____.
- To find the perimeter/area, I ______.
- I know the formula for area is _____ x ____.
- I know that if I have a compound shape I need to _____ to work out the area.
- The _____ shape has the longest perimeter because ____.
- The area of the shape is _____ squared centimetres or ____cm^2.

Previous, current and future learning objectives for measures

Year 5 – Fractions

Year 4 Vocabulary	Year 5 Vocabulary
Previous whole number, next whole number Mixed number Equivalent Improper fraction	‘1 is 10 times the size the one-tenth.’ ‘One-tenth is 10 times the size of one-hundredth.’ ‘1 is 100 times the size of one-hundredth’ ’10 tenths is equal to 1 one.’ ’10 hundredths is equal to 1 tenth.’ ‘100 hundredths is equal to 1 one.’ Hundredth more/less Midpoint (e.g. a is 0.14 because it is 1 hundredths less than the midpoint of 0.1 and 0.2, which is 0.15.’) Unit fraction Decimal fraction ‘Chain of equivalent fractions’,

Maths STEM sentences:

- I know a whole has ____ parts. Each part is worth a ____. This is the same as 1/8.
- I know that ____ of the shape is shaded because ____.
- I know that I have found a fifth of something because ____.
- ____ is equal to ____. I know this because _____
- I know that the fraction ____ has been shaded because _____
- I know ____ hundredths are shaded because ____.
- I know that I need ____ hundredths to make a whole/tenths.
- When I am writing hundredths, the ____ is always. (denominator)
- If I start at _____ hundredths, ____ will be next.
- I know that the ____ hundredths comes between ___ and ___.
- I know equivalent means ____.
- The numerator/denominator is _____ and means ____.

- I know that a decimal is ____.
- I know that 0.1 metres is ____ in centimetres.
- I know that a zero is important when dividing a number by 10 because _____.
- When I partition the number ___, there are ____ ones, _____ tenths, and ____ hundredths
- ____ = _____ + _____ + _______ + _____ (with decimal places).
- I know the value of the ____ in the number ____.
- I know an improper fraction/mixed number is ____. I can provide an example ____. I can convert between them by ____.
- I know you need ____ to simplify fractions/find equivalent fractions.
- I know to add/subtract/multiply a fraction, I have to ____.
- To find a fraction of an amount, I know you need to divide by ____ and multiply by ____.
- I know that to convert a decimal to a percentage I _____.
- ____ (percentage) = _____ (fraction) = _____ (decimal)
- Percent means _____

Previous, current and future learning objectives for fractions

Year 5 – Statistics

Year 4 Vocabulary	Year 5 Vocabulary
No specific vocabulary – see previous year groups.	No specific vocabulary – see previous year groups.

Maths STEM sentences:

- I know the ____ axis is ____.
- I know the scale goes up in ____. I worked this out by ____.
- I know that a column/row in a timetable shows ____.

Previous, current and future year groups learning objectives for Statistics

Maths overviews.

As a collaboration we have an agreed Maths overview for each year. The Maths overview is created before the start of the new academic year taking into account your thoughts, any gaps the children have and assessments.

The overviews are intended to be flexible working documents that address gaps and met the needs of our children. However, if you do intend to make changes can you inform the Maths lead first.

Useful links:

EYFS overview

Year 1 overview

Year 2 overview

Year 3 overview

Year 4 overview

Year 5 overview

Year 6 overview