WELCOME TO YEAR 3 MATHS AND ENGLISH SESSION

MATHS

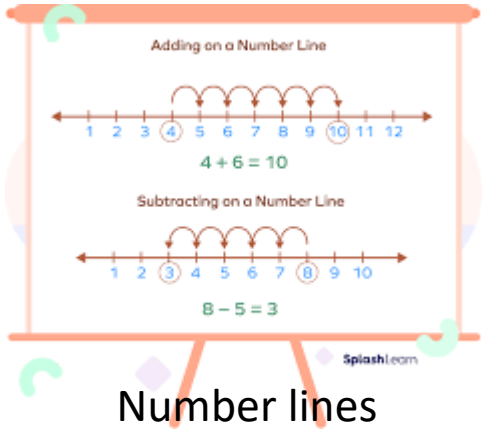
Maths

In maths, the focus is on understanding the concept and not learning procedures by rote, so that as they progress through their education at primary and secondary school, the are set up to succeed and they have strong foundations to their mathematical understanding.

Today, the focus is going to be on modelling some of the concepts we teach in Year 3, so I hope you are already to join in and have a go!

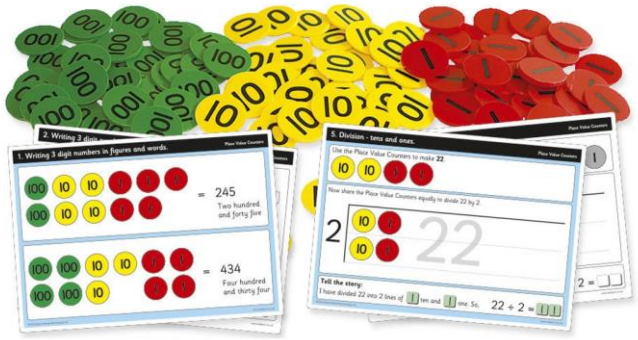
What resources do we use?

- Here are the common resources we use in class to support the children's understanding. Different resources will be used to teach different concepts.

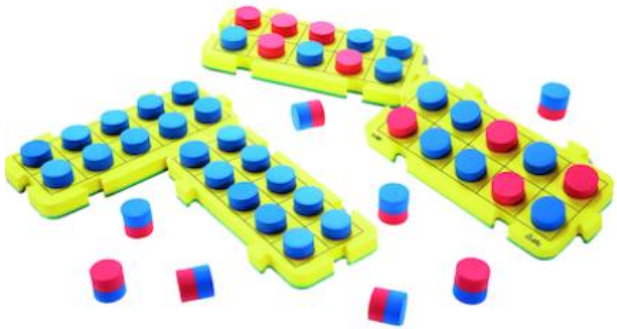


Number lines

Place Value counters.



Rekenrek.



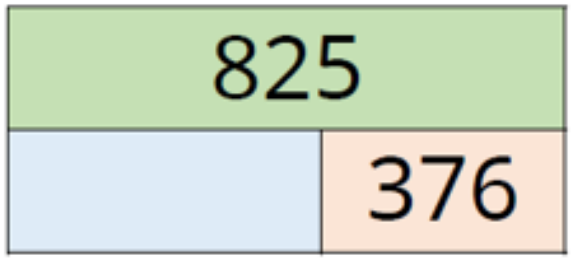
Tens Frames

Dienes or Base 10.

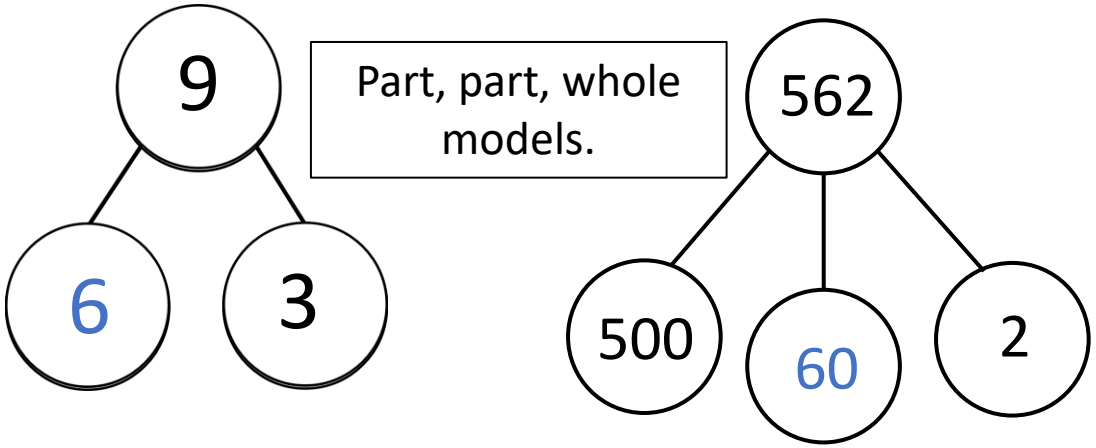
Numicon.

Part, part whole models and bar models.

- Place value concepts are modelled to the children using part, part, whole models, bar models and place value charts.
- Part, part whole models show how numbers can be partitioned (split). Bar models show how numbers relate to each other, with each box representing a known or unknown quantity. For example: 825 – 376 = ___ or ___ + 376 = 825



Bar Models

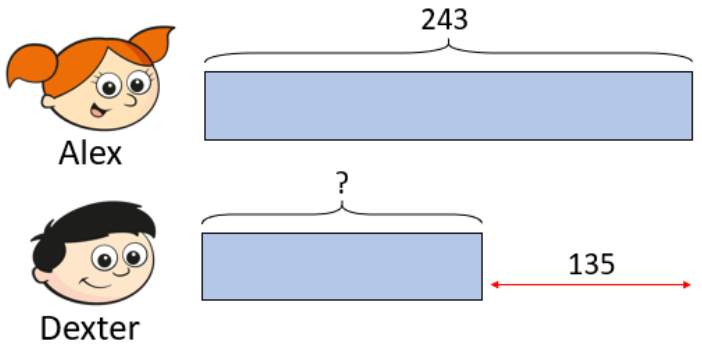


Part, part, whole models.

Alex has 243 marbles.

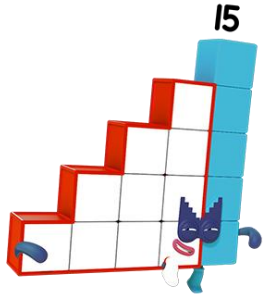
Alex has 135 marbles more than Dexter.

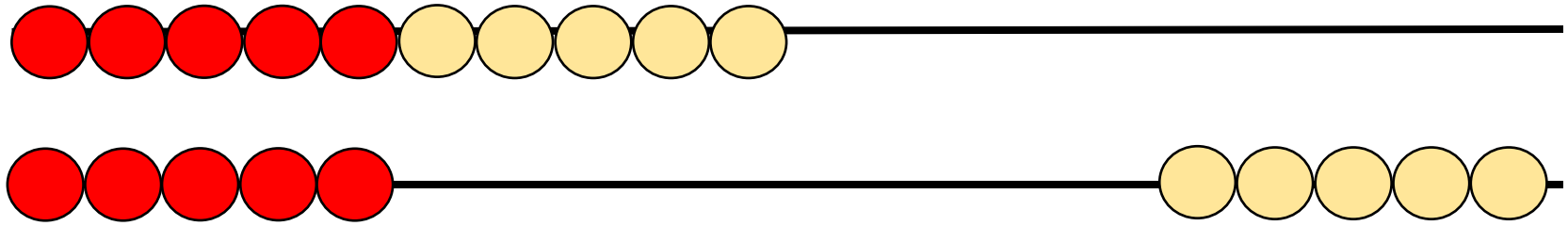
How many marbles does Dexter have?



What is bridging and how do we teach this?

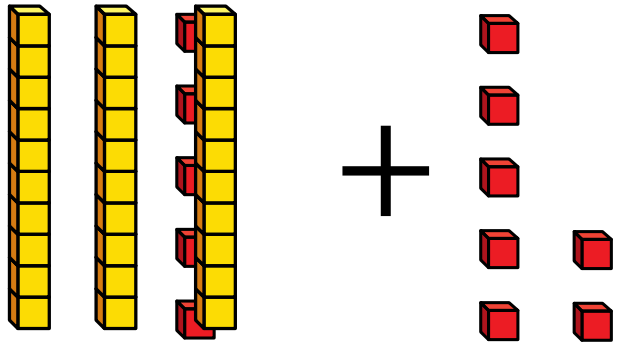
- For bridging, or counting across a ten, we use tens frames and rekenreks to support the children learning initially. A strong understanding of number bonds is essential for being able to bridge over a ten or a 100.





10 needs _____ to make _____ ;
_____ is made of 10 and _____ .

Using Dienes to support adding across a ten.

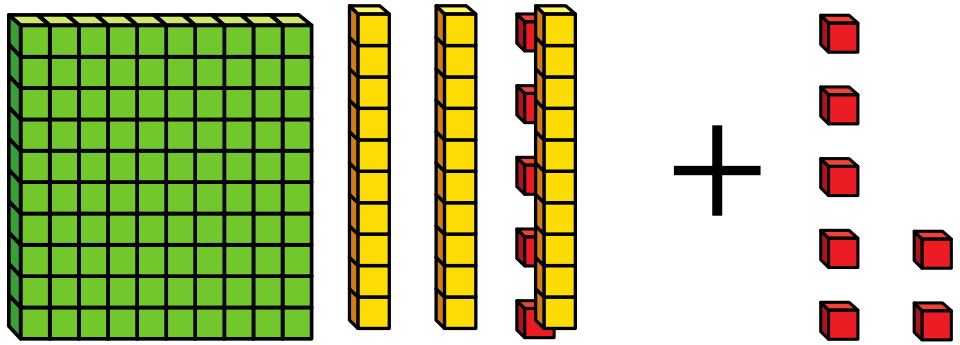


$$25 + 7 = 32$$

$$30 + 2 = 32$$

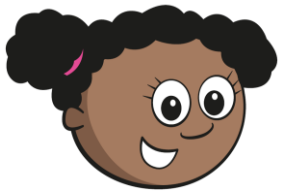
I need to add _5_ to get to the next 10, then add another _2_

Have a think



$125 + 7 = 132$

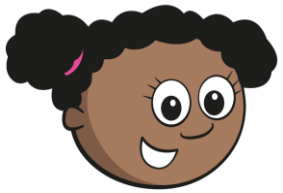
$130 + 2 = 132$

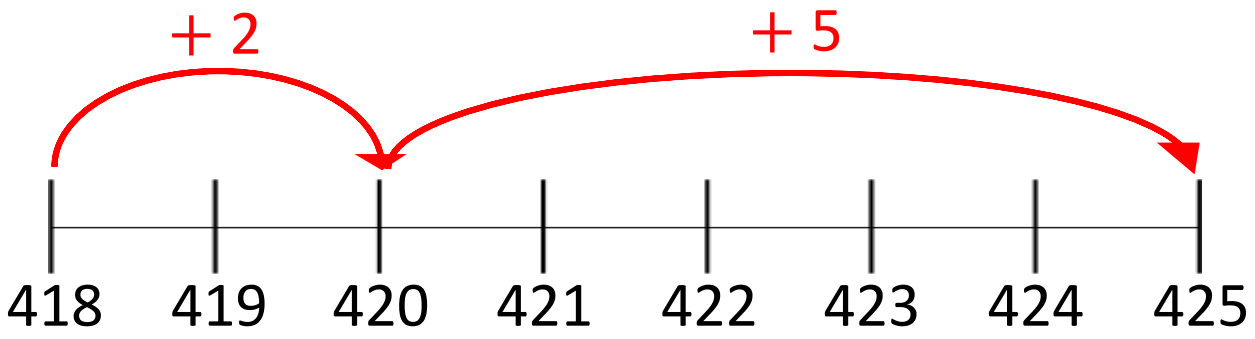


Hundreds	Tens	Ones
100 100 100	10 10 10 10	1 1 1 1 1
	10	1 1 1 1 1 1 1

+

$$345 + 7 = 352$$

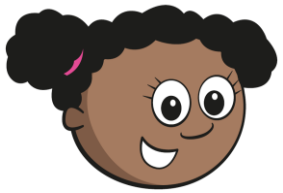




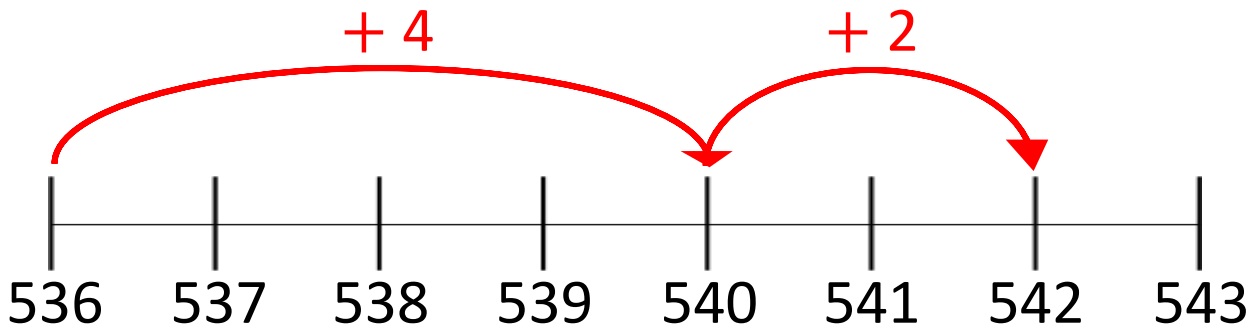
418 + 7 = 425

2 5

420 + 5 = 425



7 can be partitioned into 2 and 5

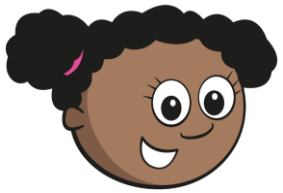


$536 + 6 = 542$

4 2

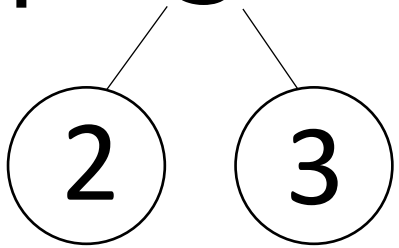
$540 + 2 = 542$

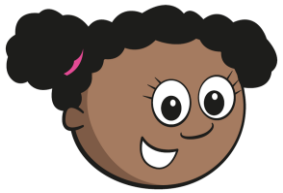
Have a think



6 can be partitioned into _4_ and _2_

$$378 + 5 = 383$$

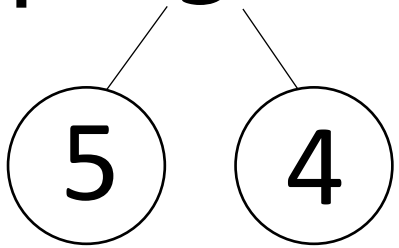




I can add 2 to get to 380

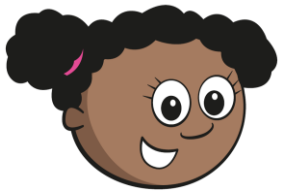
Then I need to add 3 more

$$845 + 9 = 854$$



I can add 5 to get to 850

Then I need to add 4 more.



Have a think

Column addition and subtraction.

- This is always done along side counters (or Dienes if the children still need this support) in order to embed the place value concepts.

- The language around this method is very different to when you may have been taught it at school. Words such as borrowing and carrying are no longer used and children are taught that this is incorrect. We now use the words regrouping and exchanging. This will be explained on the next few slides.

- Feel free to follow along using the place value counters or whiteboards.

Have a think

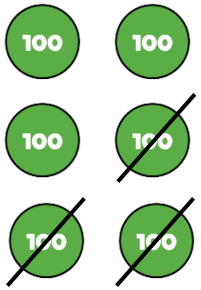
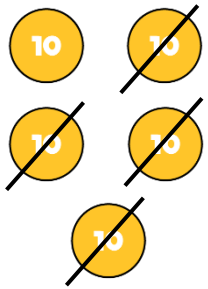
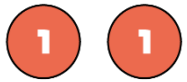
$$351 + 213 = 564$$

Hundreds	Tens	Ones
+ 100 100 100 100 100	10 10 10 10 10 10	1 1 1 1
5	6	4

	H	T	O
	3	5	1
+	2	1	3
	5	6	4

Have a think

$$652 - 340 = 312$$

Hundreds	Tens	Ones
		
3	1	2

	H	T	O
	6	5	2
–	3	4	0
	3	1	2

Do we need to make an exchange?

A tip about language:

Children are taught that the greatest value goes on the top. We do not say the greatest ‘number’ as ‘number’ just means the digit. This also applies for the word ‘biggest’. ‘Biggest’ can mean the physical size of the digit, not the value of the digit. So ‘greatest value’ not ‘biggest number’.

Mo scores 243 points in a game.

Eva scores 108 points in a game.

How many do they score in total? 351

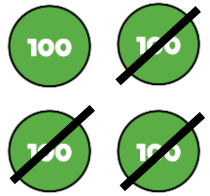
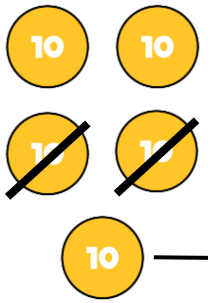
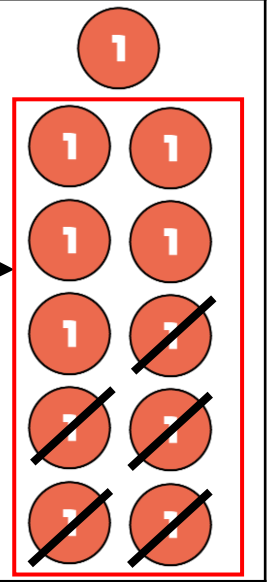
Hundreds	Tens	Ones
100 100 100	10 10 10 10	1 1 1 1 1 1 1 1 1 1
3	5	11

10

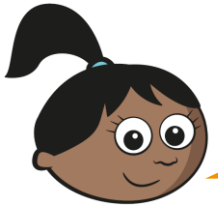
	H	T	O	
	2	4	3	
+	1	0	8	
	3	5	1	
		1		

Have a think

$$451 - 325 = 126$$

Hundreds	Tens	Ones
		
1	2	6

	H	T	O	
	4	$^{4}\cancel{5}$	$^{1}1$	
−	3	2	5	
	1	2	6	

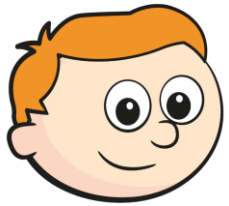


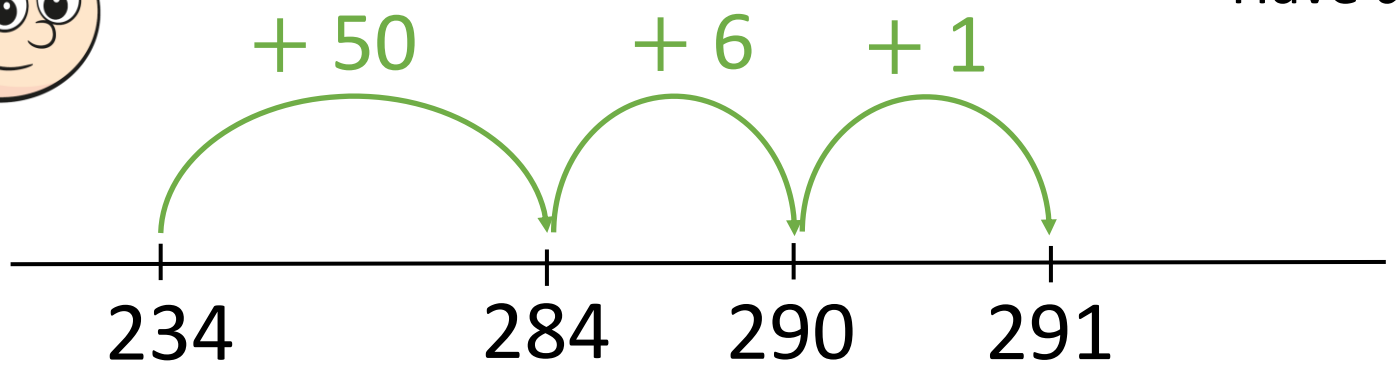
I will exchange 1 ten for 10 ones.

Number lines.

Number lines are always taught alongside other methods, such as column, so that children can begin to see the link between each method. Number lines tend to be trickier for children to understand as they are more abstract. Children need a good understanding of place value to really understand a number line.

What calculation is Ron doing?

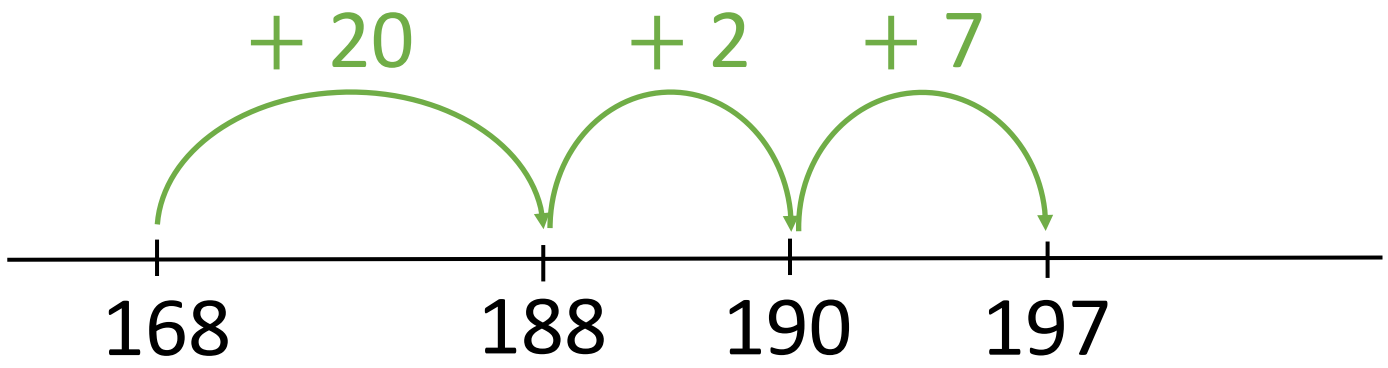


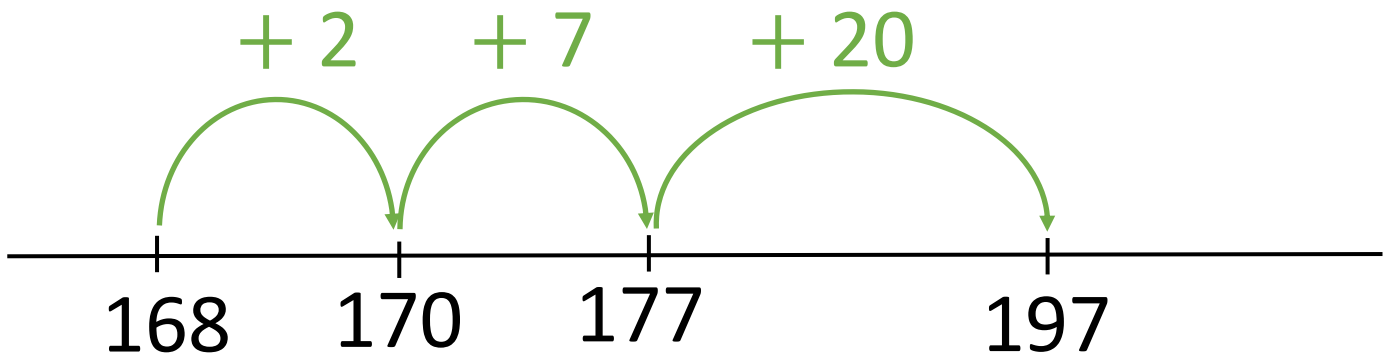


Have a think

$$234 + 57 = 291$$

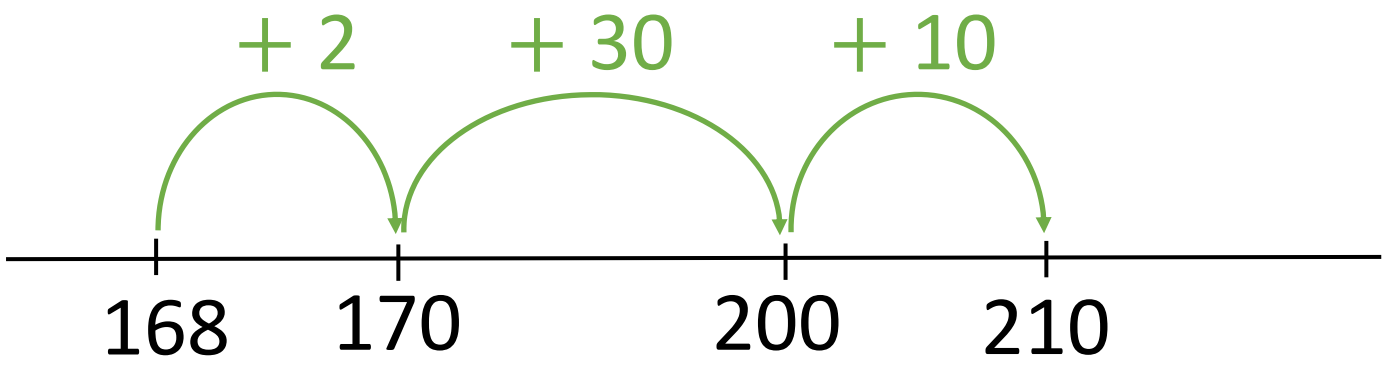
$168 + 29 = 197$



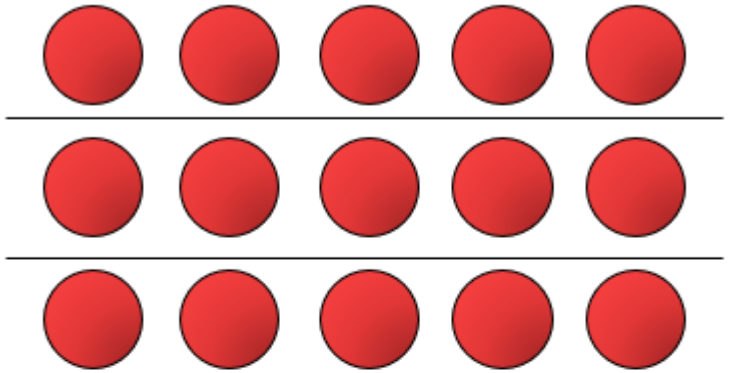


Here are two more examples of number line problems.

$168 + 42 = 210$



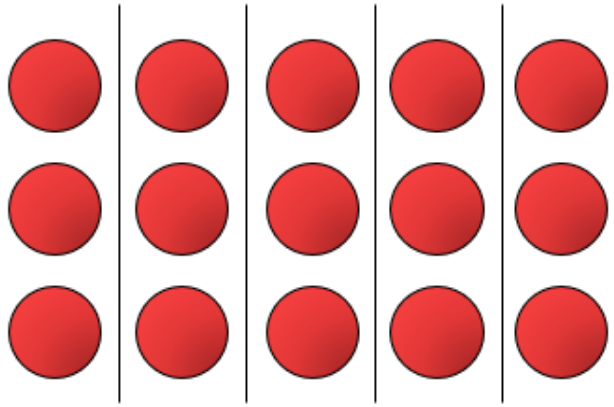
Multiplication – using arrays



There are 3 rows of 5

5 + 5 + 5 = 15

3 × 5 = 15



There are 5 columns of 3

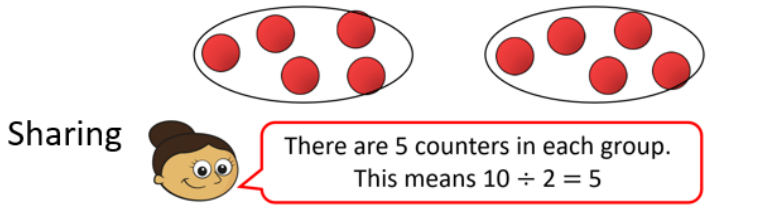
3 + 3 + 3 + 3 + 3 = 15

5 × 3 = 15

It's important that children understand the concepts of equal groups. Once they have this, we move on to looking at rows and columns. They need to have this understanding in order to understand the multiplication sentence. 3 groups of 5 (3x5) is different to 5 groups of 3 (5x3), even though the total is always the same.

Multiplication - sharing and grouping

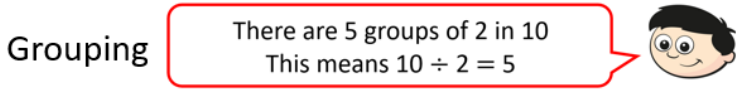
Sharing and grouping are two different concepts. Sharing is the focus in Year 2, where they practise sharing out amounts into groups (sharing one by one). Grouping supports the concept of times tables. E.g. make one group of 4, then another group of 4, then another. This gives us 3 groups of 4 which makes 12 so 3 x 4 = 12.



These counters were shared out one by one into two groups.

What is the same?
What is different?

Have a think



These counters were shared out in groups of 2.

Eva has 35 sweets.
She shares them equally between 5 friends.
How many sweets will each friend get? 7

35 has been shared equally into 5 equal groups.

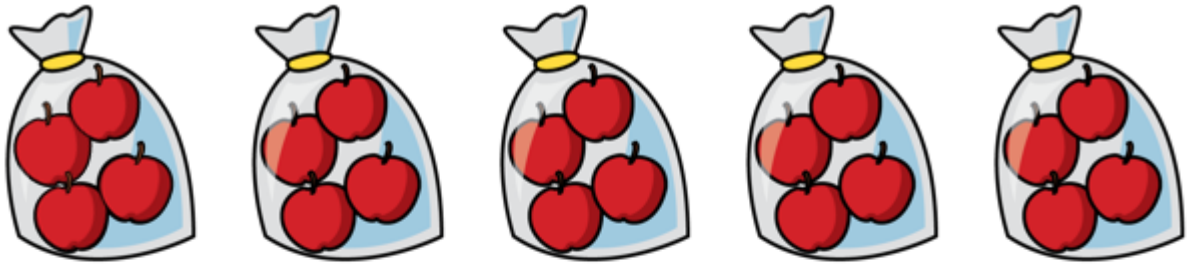
35				
7	7	7	7	7

There are 25 children in a class.
They get into equal groups of 5
How many groups will there be? 5

There are 5 groups of 5 in 25

25				
5	5	5	5	5

Multiplication – repeated addition



There are 5 equal groups with
4 in each group.

4 + 4 + 4 + 4 + 4 = 20

5 × 4 = 20

Repeated addition simply means adding the same number multiple times.
Multiplication is always shown as repeated addition alongside grouping.

There are 4 vases with 2 flowers in each vase. There are 8 flowers altogether.

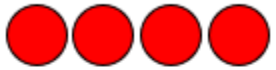
Draw a picture to match the story.

Write a repeated addition and multiplication to match the story.

2 + 2 + 2 + 2 = 8

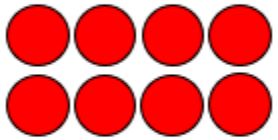
4 × 2 = 8

Multiplication – repeated addition



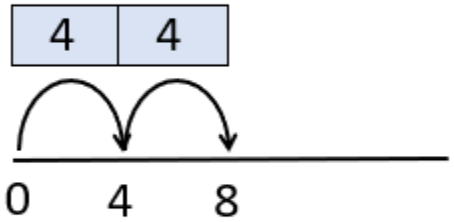
$1 \times 4 = 4$

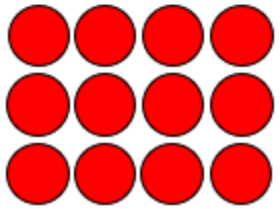
$4 \times 1 = 4$



$2 \times 4 = 8$

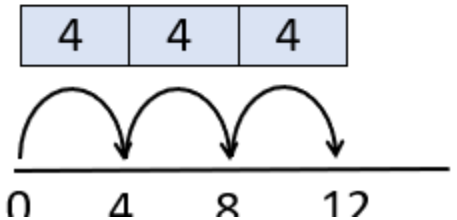
$4 \times 2 = 8$





$3 \times 4 = 12$

$4 \times 3 = 12$



You can also represent this on a number line, once children have a secure understanding of place value.

Multiplication – times tables.

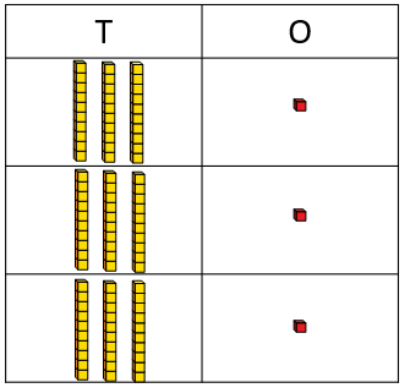
Pencils come in sets of 4
There are 29 children in the class.
There are 8 sets of pencils.
Are there enough pencils? Yes

There are 32 pencils altogether.

Children are then introduced to the times tables alongside pictures to help cement their understanding.

Counting in/chanting the times tables is also important at this stage.

Multiplication – expanded method.

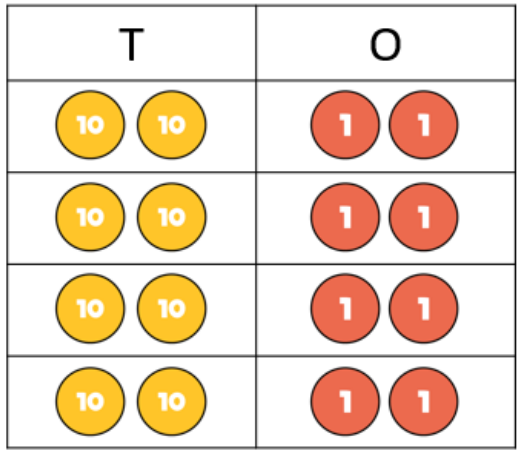


Have a think

$31 \times 3 = 93$

3 tens multiplied by 3 is equal to 90
1 one multiplied by 3 is equal to 3
31 multiplied by 3 is equal to 93

We begin by using the Dienes to make the equal groups and place them in a place value chart as above.



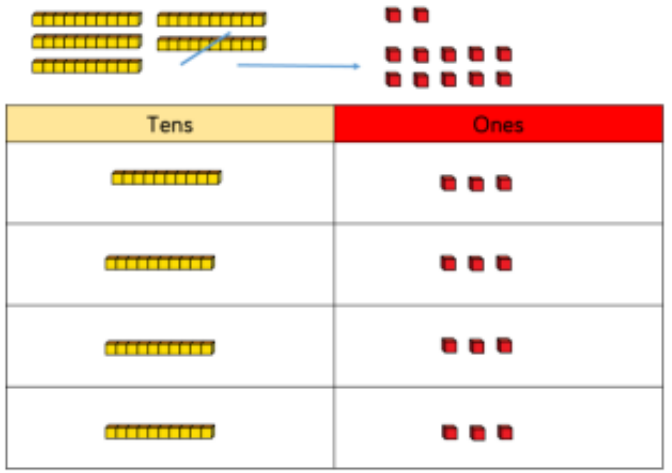
$22 \times 4 = 88$

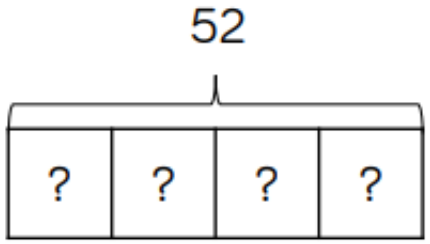
What calculation is shown?

We then represent this with place value counters along side the number sentence.

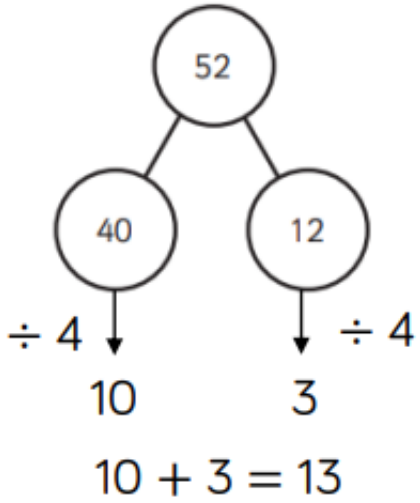
Using counters and Dienes in a place value grid is called the expanded method. Children need to be secure in this method in order to be able to use column method to solve multiplication problems.

Division

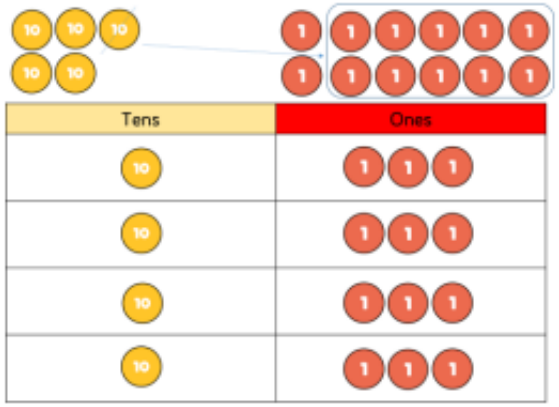




$52 \div 4 = 13$



$10 + 3 = 13$



When dividing numbers involving an exchange, children can use Dienes and place value counters to exchange one ten for ten ones.

Children should start with the equipment outside the place value grid before sharing the tens and ones equally between the rows.

Flexible partitioning in a part-whole model supports this method.

Bus stop is not taught in Year 3. It is important that children understand this method before moving onto bus stop in Year 5.

Division is always done with a place value grid in Year 3.

Maths Vocabulary

+ plus, add, addition, sum, combine, altogether, double, more than, count on. Note that 'sum' is only used for adding, not for subtraction.

- subtract, take away, minus, difference, less, halve, half, difference between, fewer, less, less than, count back.

x times, multiply, multiplication, equal groups of, lots of, product, repeated addition, double, multiplied by, arrays.

÷ divide, divided by, shared by, shared into, grouped into, grouping, sharing, equal groups, half, halve

= the same as, total, altogether, makes, equivalent, balances.

<u>When using column method</u>
Hundreds
Tens
Ones
Exchanging
Regrouping
'knock next door to take' (not borrowing/carrying)
'count the sneaky ten' (when remembering to count the extra 10/100 when adding

<u>When talking about place value</u>
Try to use 'value' not 'number'.
Try to use 'greatest' not 'biggest'
Partition – when you split a number into hundreds, tens and ones.
Flexible partitioning – when you split an amount into different parts (not necessarily hundreds, tens and ones.)

<u>When talking about shape</u>
2D shapes have sides.
3D shapes have edges and faces.
Corners are called vertices (vertex for a single corner. We do not use the word corner).
A sphere has a cured surface, not a curved face.
A cone has a apex not a point.
An edge is where 2 flat faces meet.

Fluency Sessions

We are part of a national programme called Mastering Number which focuses on the children developing instant recall in the number facts that are essential for children to know by the end KS1.

This term, we are reviewing this in our fluency sessions. These are 10-15 minute and run 5 times a week.

This is a priority as a school as children who leave KS1 not knowing these facts struggle to make progress in KS2 as new learning is reliant upon this.

Adding 1 and 2 | Bonds to 10 | Adding 10 | Bridging/ compensating

Doubles | Adding 0 | Near doubles

Y1 facts

Y2 facts

+	0	1	2	3	4	5	6	7	8	9	10
0	0 + 0	0 + 1	0 + 2	0 + 3	0 + 4	0 + 5	0 + 6	0 + 7	0 + 8	0 + 9	0 + 10
1	1 + 0	1 + 1	1 + 2	1 + 3	1 + 4	1 + 5	1 + 6	1 + 7	1 + 8	1 + 9	1 + 10
2	2 + 0	2 + 1	2 + 2	2 + 3	2 + 4	2 + 5	2 + 6	2 + 7	2 + 8	2 + 9	2 + 10
3	3 + 0	3 + 1	3 + 2	3 + 3	3 + 4	3 + 5	3 + 6	3 + 7	3 + 8	3 + 9	3 + 10
4	4 + 0	4 + 1	4 + 2	4 + 3	4 + 4	4 + 5	4 + 6	4 + 7	4 + 8	4 + 9	4 + 10
5	5 + 0	5 + 1	5 + 2	5 + 3	5 + 4	5 + 5	5 + 6	5 + 7	5 + 8	5 + 9	5 + 10
6	6 + 0	6 + 1	6 + 2	6 + 3	6 + 4	6 + 5	6 + 6	6 + 7	6 + 8	6 + 9	6 + 10
7	7 + 0	7 + 1	7 + 2	7 + 3	7 + 4	7 + 5	7 + 6	7 + 7	7 + 8	7 + 9	7 + 10
8	8 + 0	8 + 1	8 + 2	8 + 3	8 + 4	8 + 5	8 + 6	8 + 7	8 + 8	8 + 9	8 + 10
9	9 + 0	9 + 1	9 + 2	9 + 3	9 + 4	9 + 5	9 + 6	9 + 7	9 + 8	9 + 9	9 + 10
10	10 + 0	10 + 1	10 + 2	10 + 3	10 + 4	10 + 5	10 + 6	10 + 7	10 + 8	10 + 9	10 + 10

Ofsted Review 2022

Pupils' gaps in knowledge tend to be centred around, but not limited to, addition facts in younger year groups. This was for some, but not all pupils. These early gaps in knowledge may not become apparent until a significant amount of time has elapsed. This is because it is possible, in the medium term, for pupils to understand what is being taught and then keep up with extra classroom support and slower calculation. However, this is at the expense of later ability to access the curriculum.

NUMBOTS and TIMES TABLES ROCK STARS

Numberbots and TTRS are a way that children can practice these essential number facts at home. They work there way up through levels and can achieve certificated for their progress. We also have regular tournaments within the school.

After Christmas, our fluency sessions will focus on multiplication facts and learning these will have a huge impact on the children learning of multiplication, division and fractions.

The children's login details can be found in their reading records

Accelerated Reader

What is Accelerated Reader?

- Begins with Star Assessments - An adaptive assessment programme that determines the level your child is reading at.
- These assessments happen 4-5 times a year.
- AR allows us to track children's understanding of what they have read.
- It tracks reading fluency, reading age and provides us with lots of fun data!
- It gives the children suggestions for next books based on how they are reading.

Why Accelerated Reader?

- Ensure that all children are reading books that are matched to their reading level.
- It gives teachers immediate feedback on how children are reading and their next targets.
- Our book boxes were out-dated so this was a chance to revamp and re-level our books.
- Promotes a love of reading and encourages a wider range of books.

Accelerated Reader 'non-negotiables'

READING TIME

20-35 minutes a day scheduled independent reading time for students

RESOURCES

Regular access to books, Access to technology for quizzing.

ANALYSE DATA

Monitor student performance, Set student targets for motivation.

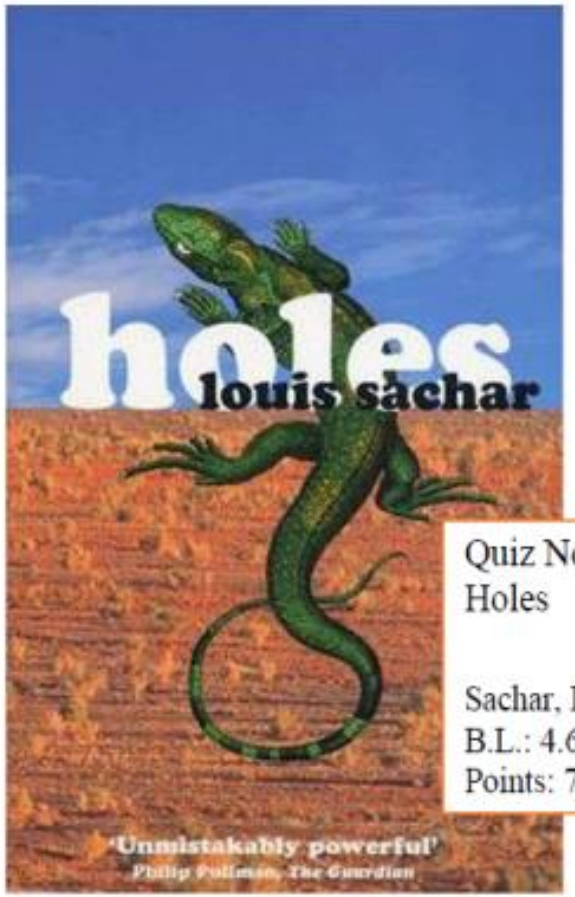
Accelerated Reader

- Children are given a ZPD level. This stands for ‘Zone of Proximal Development’. This is the range at which children will make good progress.
- Children choose books at their reading level. Most ZPD levels are quite broad.
- Children can choose library books that are outside of their ZPD. It is important to promote a wide range of different reading books.
- All labelled books should have a quiz. The search tool allows you to search by quiz number, title or author.
- Quizzes should be completed within 24 hours of finishing the book. This can be at home or at school.
- Quizzes really test that they have read the book – children can’t just watch the film!
- Quizzes start at 5 questions at the start of the book levels and progress to a maximum of 20 as the children become stronger

Book level, interest levels and points

- **Book Level**
  - Difficulty of text (range: 0.2 – 13.5)
- **Interest Level**
  - Relates to content and appropriateness

    LY - Lower Years ages 5-8
    MY - Middle Years ages 9-13
    MY+ - Middle Years Plus ages 12-13
    UY - Upper Years ages 14+
- **Points**
  - Text length (points range from: 0.5 – 118)

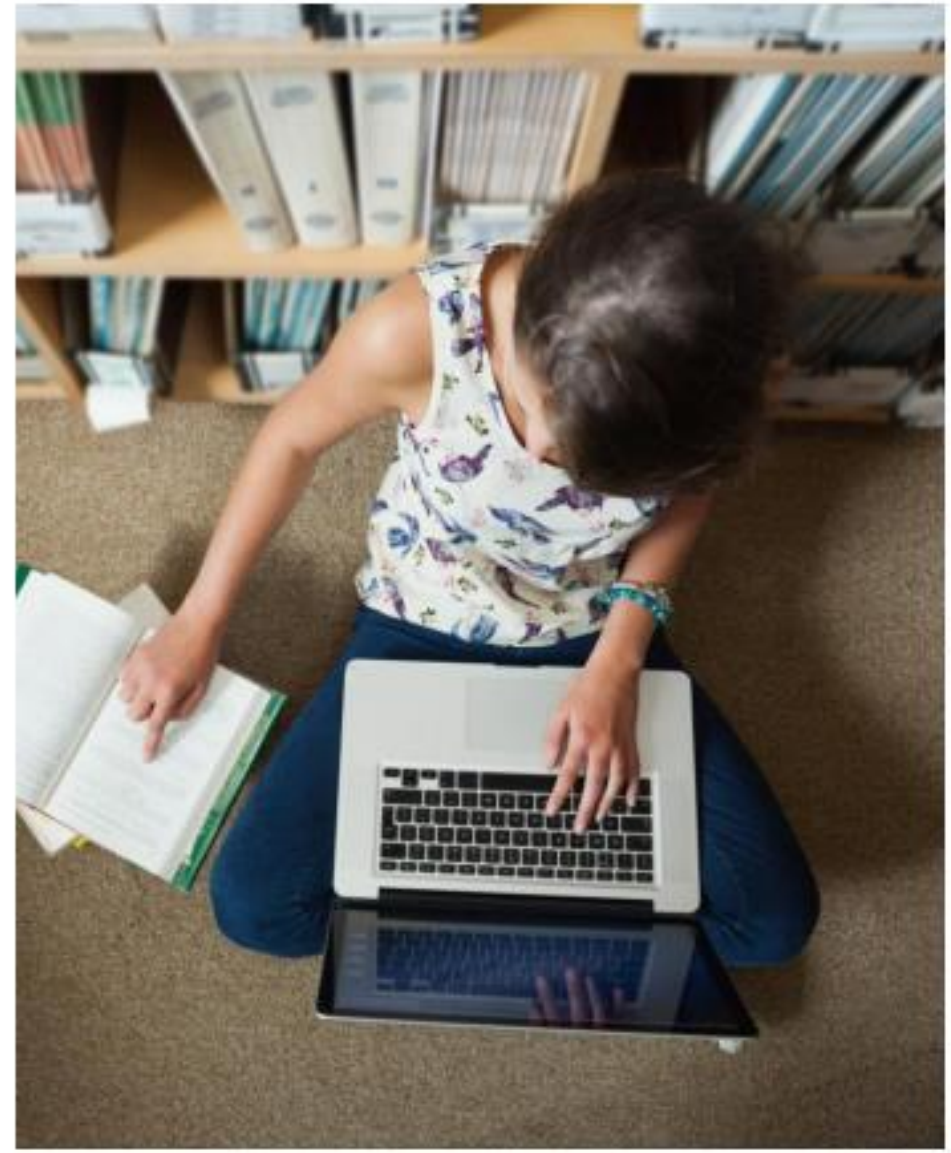


Our Book Bands

ZPD	
0-1.9	
2-2.9	
3-3.9	
4-4.9	
5-5.9	
6+	

Taking a Reading Practice quiz

- Quiz on a PC, laptop, school tablets or iPad
- Quiz within 24 hours
- No time limit
- Voice recorded quizzes at the lower levels
- 3, 5, 10 and 20 questions
- Pass rate 67% on 3 question quizzes (2 out of 3 correct), 60% on 5 and 10 question quizzes and 70% on 20 question quizzes
- Results immediately displayed
- Accumulate points pro-rata to quiz score



Question 2 of 10

Why couldn't Charlotte see Wilbur very well?

A He was hiding behind the manure pile.

B Her web was swaying in the wind.

C She was near-sighted.

D It was raining outside and water was getting in her eyes.

Example of the questions the children will see taken from Charlotte's Web.

Children have their login and password in their reading records.

Question 3 of 10

Mr Arable's response to Fern's story about the animals talking was ---.

A that maybe the animals did talk and her hearing was sharper

B that she should not tell lies

C to make her stay away from Uncle Homer's farm for a while

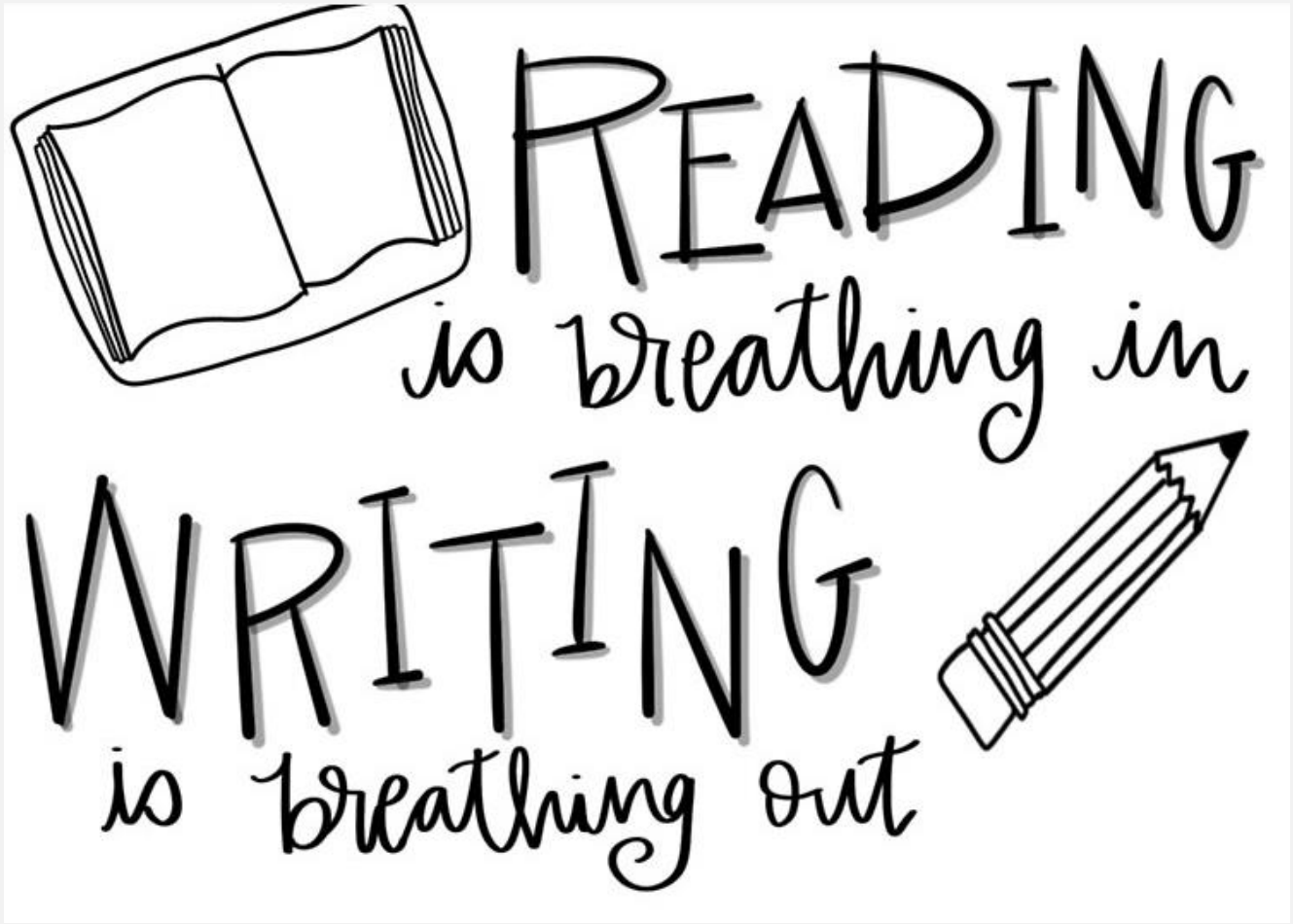
D to make her go to bed without supper

Accelerated reader and Reading for Pleasure

- As great as AR is, it is important to remember that levels and collecting points is not the be all and end all.
- Choosing a book because you love the look of the cover, or because the blurb has really caught your attention, or because a friend has recommended it is incredibly important.
- At The Greville, we encourage our children to choose books ‘just because’, alongside their levelled reading book.
- Children should be encouraged to reread their favourite books, or choose a book outside their comfort zone or pick up a book because their friend is reading it and they want to be able to talk about it with them.
- Reading to, and with, your child is a vital part of this. We actively encourage you to share books with your children and to read books that are above their level to them if they want to read it. Don’t restrict your child’s reading because the book may be too hard for them.

Writing at The Greville

Supporting your child in writing



Reading widely and often is one of the best things you can do to support your child with writing

imagination

vocabulary

structure

The Greville Writing Process

1: Immersion

2: Generating Ideas

3: Rehearsal

4: Initial Write

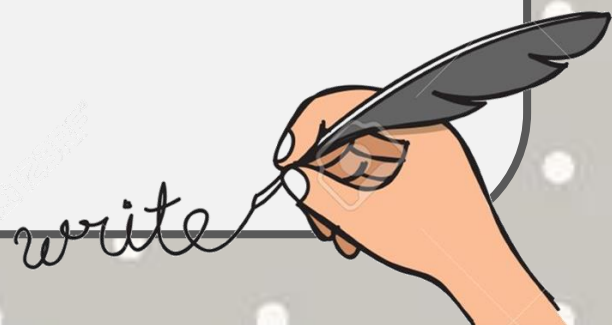
5: Review and Revise

6: Publish and Share

Understanding the audience and purpose of writing.

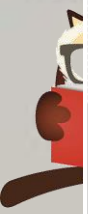
Writing inspired by a wide range of high quality texts (books, visual clips etc).

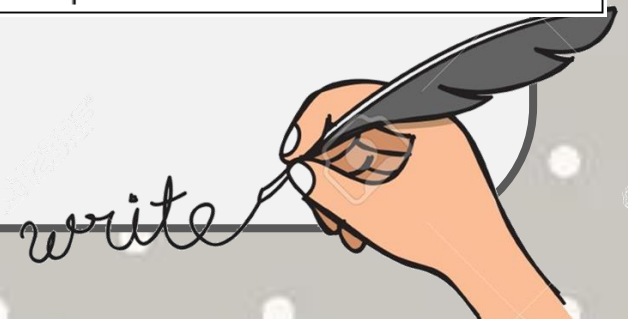
Focus on rehearsing the skills needed for writing.



YEAR 3 WRITING CHECKLIST

Objective based on National Curriculum
Handwriting and Presentation
Write letters (including capitals) of the correct size and orientation
Handwriting is mostly joined
Handwriting is legible
Punctuation
Capital letters and end punctuation for sentences Y2
Capital letters for proper nouns Y2
Commas in lists Y2
Apostrophe for singular possession Y2
Apostrophes for contraction Y2
Inverted commas for direct speech
Spelling
High Frequency Words accurate Y2
Use prefixes and suffixes mostly accurately
Most homophones correct
Spell most Year 3 words correctly
Grammar and Vocabulary
Past and present tenses used accurately Y2
Use co-ordinating conjunctions Y2
Use subordinating conjunctions (and subordinate clauses)
Use adverbs to add detail
Use simple noun phrases
Use prepositions correctly
Use 'a' and 'an' correctly
Composition
Begin to use paragraphs accurately
Use simple organisational devices e.g. subheadings (non-fiction)
In narrative, begin to describe characters
In narrative, begin to describe settings
Begin to use more adventurous vocabulary
Begin to use different sentence structures
Proofread for spelling and punctuation errors
Begin to evaluate and edit their writing in order to make improvements





A Focus on Sentence Structure Year 3

Sentence Type	Example
Simile	The moon hung above us **like a** pale, white face. Although the monster was **as tall a**s a mountain, he wasn't very frightening.
Ad, same ad	He was a **fast** runner, **fast** because he needed to be. It was a **silent** town, **silent** in a way that did not make you feel restful.
Double ly ending	She laughed **loudly** and **heartily**. Dean tiptoed **quietly** and **carefully**.
P.C. (paired conjunctions)	It was **both** cold **and** unpleasant in the workshop. It was **not so** much lack of time **as** fear that stopped him from taking the new job. **Neither** money **nor** gifts could make him leave.
____ing, ____ed sentence	**Walking** in the park, she **stopped** when she heard a cry. **Holding** his breath, he **jumped** into the pool.

Year Group Spelling Words

Year 3 Challenge Words (curriculum word list)

actual	notice	history
answer	regular	mention
bicycle	therefore	occasionally
circle	build	probably
earth	describe	reign
enough	imagine	sentence
fruit	library	accidentally
island	natural	breathe
often	ordinary	century
popular	promise	consider
centre	recent	eight
decide	suppose	guard
disappear	weight	heard
early	address	peculiar
heart	arrive	possible
learn	certain	quarter
minute	experience	

Our spelling scheme

Practising Spellings

Rainbow Write

First write each word in pencil. Then trace over each word three times. Each time you trace, you must use a **DIFFERENT** colour crayon. Trace neatly and you will see a rainbow!

Silly Sentences

Write silly sentences using a spelling word in each sentence. Please underline your spelling words! Write neatly!

Example: My dog wears a blue and purple dress when he takes a bath.

Hidden Words

Draw and color a picture. Hide your spelling words inside your picture.

Show your picture to someone and see if they can find your hidden words!

Backwards Words

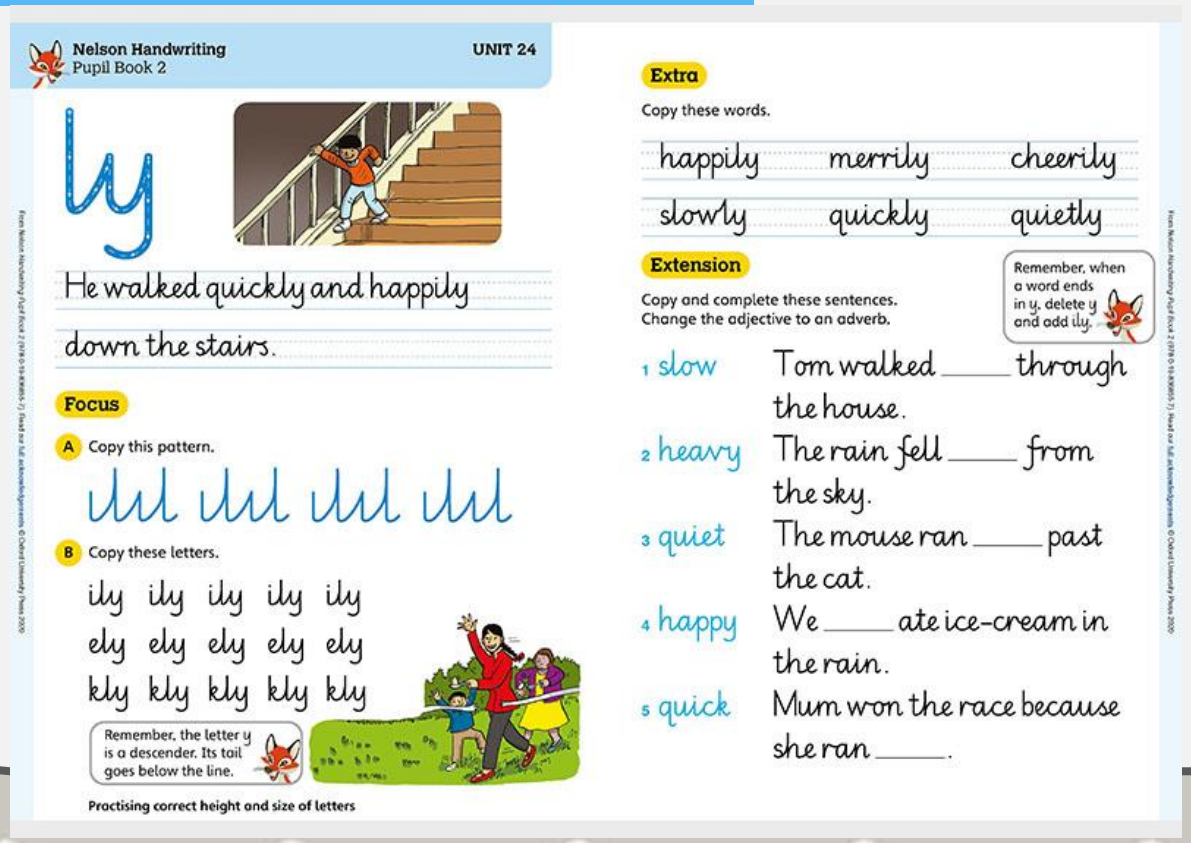
Write your spelling words forwards and then backwards. Write neatly!

Example: where erehw

All children have an EdShed/Spelling Shed login in their reading records. They need to select the phase 3 spelling games.

Handwriting and Writing Fluency

Nelson Handwriting



Nelson Handwriting
Pupil Book 2

UNIT 24

ly

He walked quickly and happily down the stairs.

Focus

A Copy this pattern.

B Copy these letters.

ily ily ily ily ily
ely ely ely ely ely
kly kly kly kly kly

Remember, the letter y is a descender. Its tail goes below the line.

Practising correct height and size of letters

Extra

Copy these words.

happily	merrily	cheerily
slowly	quickly	quietly

Extension

Copy and complete these sentences.
Change the adjective to an adverb.

Remember, when a word ends in y, delete y and add ily.

1 slow Tom walked _____ through the house.

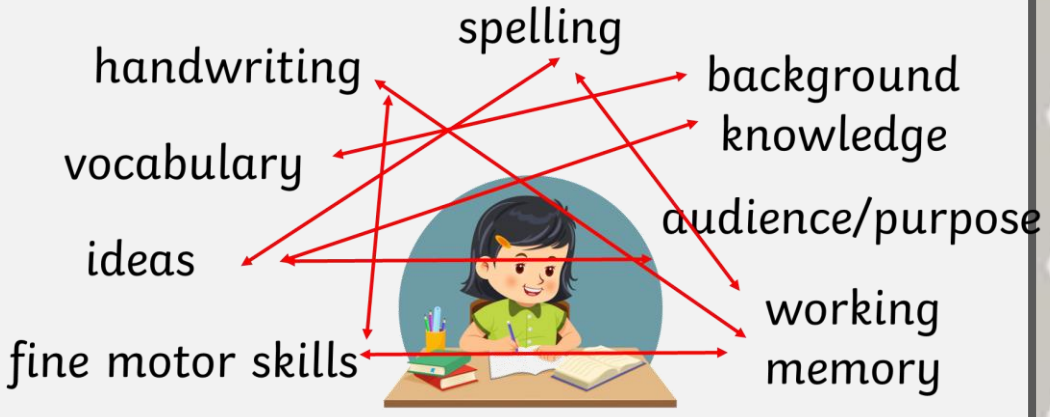
2 heavy The rain fell _____ from the sky.

3 quiet The mouse ran _____ past the cat.

4 happy We _____ ate ice-cream in the rain.

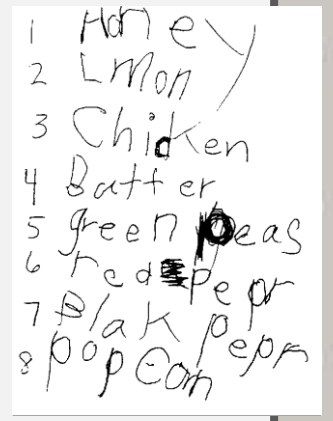
5 quick Mum won the race because she ran _____.

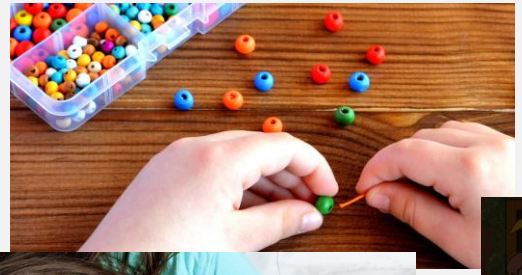
Writing involves so many skills and facets. By developing children's handwriting and fluency, children can focus more on the other aspects of writing.



Some ideas for helping your child at home

READ
READ
READ





Here are just some of things you can write together:

Riddles, rhymes, songs, jokes, poems, signs, labels, lists, charts, booklets, games, recipes, instructions, how to guides, everything I know about... letters, anecdotes, vignettes, true stories, invented stories, comics, fairy-tales, myths, experiments, letters, scripts and plays.

THANK YOU.
PLEASE DO ASK IF YOU
HAVE ANY QUESTIONS.