



YEAR 4 MATHS WORKSHOP

Miss Kelly & Miss Hamilton

AIMS OF THE SESSION:

- To explain the concrete, pictorial and abstract approaches in maths
- To share the Wood Fold Maths sequence
- To discuss the written calculation policy
- To offer suggestions and ideas to support your child at home.



CPA APPROACH:

Concrete, Pictorial and Abstract

Concrete:

Doing the maths



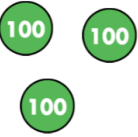
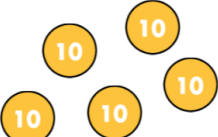
CPA APPROACH:

Concrete, Pictorial and Abstract

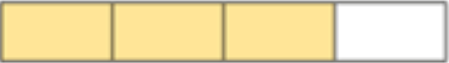
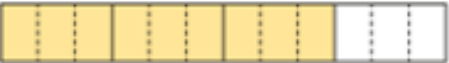
Pictorial:

Seeing the maths

Making connections between the concrete and the pictorial representations and the pictorial and the abstract. E.g. part whole models, bar models, ten frames.

H	T	O
		

Use the bar models to find the equivalent fractions.

a)   $\frac{3}{4} = \boxed{}$

b)   $\frac{2}{5} = \boxed{}$

CPA APPROACH: Concrete, Pictorial and Abstract

Abstract:

The final stage is for children to understand abstract mathematical concepts, signs and notation.

When a child demonstrates with concrete models and pictorial representations that they have grasped a concept, we can be confident that they are ready to explore the abstract. At this stage, pupils are expected to have a depth of knowledge, which can now be applied without the need for physical or visual support strategies.

[illegible]

WOOD FOLD MATHS SEQUENCE:

- Flashback 4
 - Arithmetic
 - Times Tables
 - Get Ready
 - New Learning
 - Problem Solving & Reasoning
-

FLASHBACK 4:

Flashback 4 is a daily 4-question activity from White Rose Maths that serves as a starter to a lesson, reinforcing knowledge and skills from the previous lesson, week, and term to aid retention and promote a mastery-based approach to learning.

Flashback 4

Year 3 | Week 4 | Day 1

1) How much money is there altogether?



2) Calculate $96 \div 3$

3) Use $<$, $>$ or $=$ to compare.
 8×3 4×6

4) What is 10 more than 472?





ARITHMETIC:

Arithmetic covers the four foundational operations: addition, subtraction, multiplication and division.

Arithmetic is essential because it forms the foundational building blocks for all other forms of mathematics.

The teacher will share an example with the children and discuss different strategies to answer the question. The children will then complete a set of 4 questions each day and then on the 5th day they will complete a quiz.

Example	$34 + 12 =$
Q1	$45 + 13 =$
Q2	$22 + 16 =$
Q3	$67 + 21 =$
Q4	$80 + 15 =$
Recall Calculation	$9 \times 3 =$

TIMES TABLES:

Particular attention is placed on the children having security and fluency with times tables. Each child will be exposed to daily teaching of times tables in relation to the school's Times Tables Curriculum Overview, as well as a weekly test consisting of 25 multiplication and division questions.

By the end of Year 4 the children are expected to know all times tables up to 12x12

Multiplication Check – online assessment. June 2026. 25 questions, 2 ½ mins.

3

STAGE 5

BLOCK 1

STEP 5

Fluency Bee

The 3 times-table

Complete the calculations.

1

$5 \times 3 = \square$

2

$1 \times 3 = \square$

3

$\square = 6 \times 3$

4

$\square = 9 \times 3$

GET READY:

"Get Ready" in White Rose Maths refers to the initial part of a lesson where children are prompted to review and activate prior knowledge relevant to the new topic, ensuring they have the necessary foundation before moving on to the main part of the lesson.

1) 28, 29, 30, 31, ____ , ____ , ____

2) 46, 45, 44, 43, ____ , ____ , ____

3) 1 ten is equal to _ ones.
2 tens is equal to _____ ones.

4) Make 526 with place value counters.

NEW LEARNING:

The main body of the lesson will be taught by the teacher, focusing on the individual learning elements of the curriculum.

Explaining, modelling, checking for understanding, then when ready, on to independent practice.

Learning in each lesson will be recorded in either Maths or White Rose books, with opportunities given for children to self and peer assess where possible.

Round to the nearest 10, 100 or 1,000

1 Draw an arrow to show 628 on each number line. Complete the sentences.

a)

628 is closer to than

628 rounded to the nearest 10 is

b)

628 is closer to than

628 rounded to the nearest 100 is

c)

628 is closer to than

628 rounded to the nearest 1,000 is

2 Draw an arrow to show 9,515 on each number line. Complete the sentences.

a)

9,515 rounded to the nearest 10 is

b)

9,515 rounded to the nearest 100 is

c)

9,515 rounded to the nearest 1,000 is

3 Complete the sentences.

a) 452 rounded to the nearest 100 is

b) 2,452 rounded to the nearest 100 is

c) 4,609 rounded to the nearest 10 is

d) 6,058 rounded to the nearest 1,000 is

e) 9,918 rounded to the nearest 10 is

f) 7,511 rounded to the nearest 1,000 is

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PROBLEM SOLVING & REASONING:

To conclude the lesson, children will complete reasoning problems that consolidates their understanding from the lesson.

Whitney puts some counters on a place value chart to make a number.

Th	H	T	O

My number
rounds to 6,000
when rounded to the
nearest 10, 100
or 1,000



What could Whitney's number be?

What must Whitney's number be if she uses exactly 30 counters?

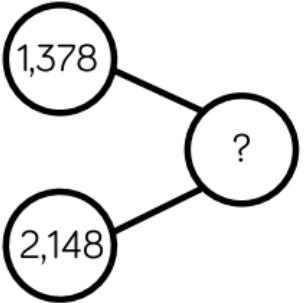
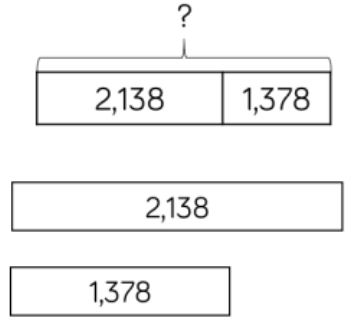
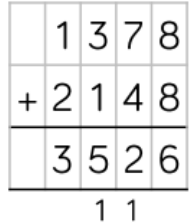
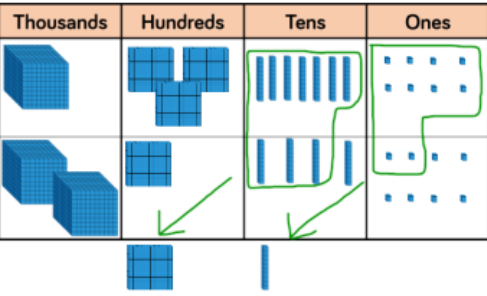
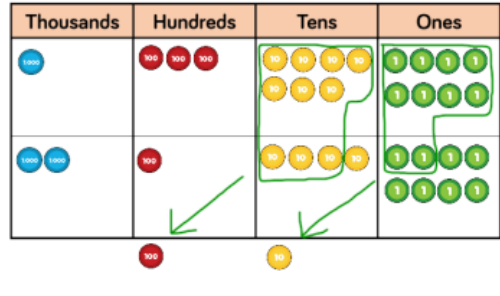
Round to the nearest 10, 100 or 1,000

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ADDITION:

Vocabulary:

- Add
- Column addition
- Exchange
- Estimate
- More
- Plus
- Sum
- Total
- Altogether
- Increase
- Inverse

Skill: Add numbers with up to 4 digits	Year: 4
   $1,378 + 2,148 = 3,526$  	Base 10 and place value counters are the most effective manipulatives when adding numbers with up to 4 digits. Ensure children write out their calculation alongside any concrete resources so they can see the links to the written column method. Plain counters on a place value grid can also be used to support learning.

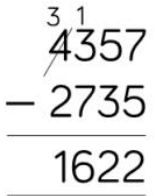
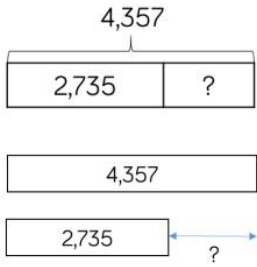
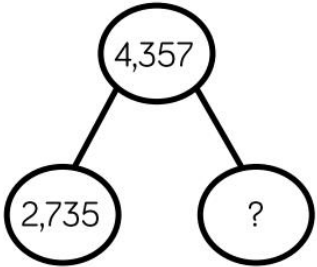
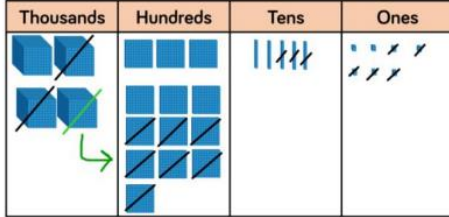
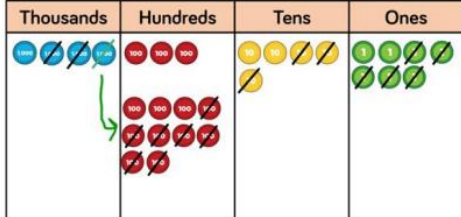
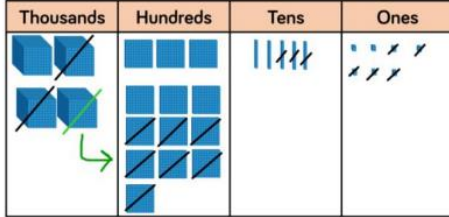
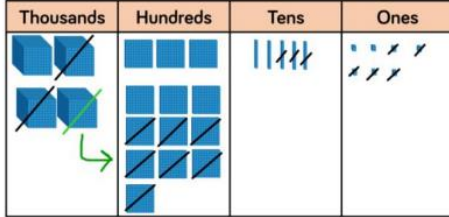
ADDITION:

Skill: Add numbers with up to 4 digits	Year: 4																
$1,378 + 2,148 = 3,526$ <table border="1"><thead><tr><th>Thousands</th><th>Hundreds</th><th>Tens</th><th>Ones</th></tr></thead><tbody><tr><td></td><td></td><td></td><td></td></tr></tbody></table> <table border="1"><thead><tr><th>Thousands</th><th>Hundreds</th><th>Tens</th><th>Ones</th></tr></thead><tbody><tr><td></td><td></td><td></td><td></td></tr></tbody></table>	Thousands	Hundreds	Tens	Ones					Thousands	Hundreds	Tens	Ones					Base 10 and place value counters are the most effective manipulatives when adding numbers with up to 4 digits. Ensure children write out their calculation alongside any concrete resources so they can see the links to the written column method. Plain counters on a place value grid can also be used to support learning.
Thousands	Hundreds	Tens	Ones														
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SUBTRACTION:

Vocabulary:

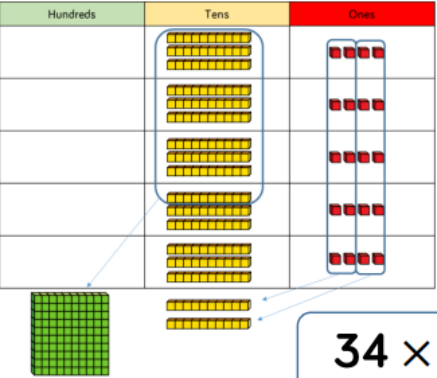
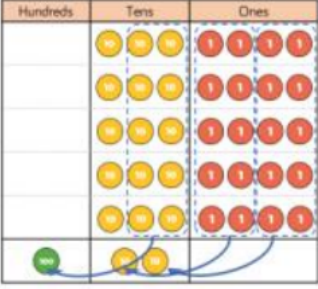
- Subtract
- Takeaway
- Minus
- Decrease
- Column subtraction
- **Difference**
- Fewer
- Less
- Left
- Leftover
- Exchange
- Inverse

Skill: Subtract numbers with up to 4 digits	Year: 4								
 $4,357 - 2,735 = 1,622$ <table border="1"><thead><tr><th>Thousands</th><th>Hundreds</th><th>Tens</th><th>Ones</th></tr></thead><tbody><tr><td></td><td></td><td></td><td></td></tr></tbody></table>	Thousands	Hundreds	Tens	Ones					Base 10 and place value counters are the most effective manipulatives when subtracting numbers with up to 4 digits. Ensure children write out their calculation alongside any concrete resources so they can see the links to the written column method. Plain counters on a place value grid can also be used to support learning.
Thousands	Hundreds	Tens	Ones						
									

MULTIPLICATION:

Vocabulary:

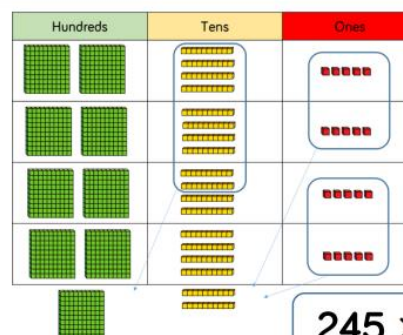
- Multiply
- Groups of
- Multiplication
- Multiplied by
- Commutative
- Factors
- Multiples
- Grid method
- Inverse
- Ten times greater

Skill: Multiply 2-digit numbers by 1-digit numbers				Year: 3/4																																															
				Teachers may decide to first look at the expanded column method before moving on to the short multiplication method. The place value counters should be used to support the understanding of the method rather than supporting the multiplication, as children should use times table knowledge.																																															
<table border="1" style="text-align: center;"> <thead> <tr><th></th><th>H</th><th>T</th><th>O</th></tr> </thead> <tbody> <tr><td></td><td></td><td>3</td><td>4</td></tr> <tr><td>x</td><td></td><td></td><td>5</td></tr> <tr><td colspan="4"> </td></tr> <tr><td></td><td>2</td><td>0</td><td>(5 x 4)</td></tr> <tr><td>+</td><td>1</td><td>5</td><td>0 (5 x 30)</td></tr> <tr><td></td><td>1</td><td>7</td><td>0</td></tr> </tbody> </table> $34 \times 5 = 170$ <table border="1" style="text-align: center;"> <thead> <tr><th></th><th>H</th><th>T</th><th>O</th></tr> </thead> <tbody> <tr><td></td><td></td><td>3</td><td>4</td></tr> <tr><td>x</td><td></td><td></td><td>5</td></tr> <tr><td colspan="4"> </td></tr> <tr><td></td><td>1</td><td>7</td><td>0</td></tr> </tbody> </table>						H	T	O			3	4	x			5						2	0	(5 x 4)	+	1	5	0 (5 x 30)		1	7	0		H	T	O			3	4	x			5						1	7
	H	T	O																																																
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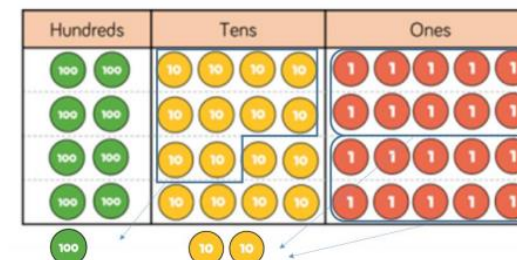
Skill: Multiply 3-digit numbers by 1-digit numbers

Year: 3/4



	H	T	O
	2	4	5
x			4
	9	8	0
	1	2	

$$245 \times 4 = 980$$



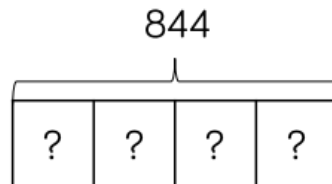
When moving to 3-digit by 1-digit multiplication, encourage children to move towards the short, formal written method. Base 10 and place value counters continue to support the understanding of the written method. Limit the number of exchanges needed in the questions and move children away from resources when multiplying larger numbers.

DIVISION:

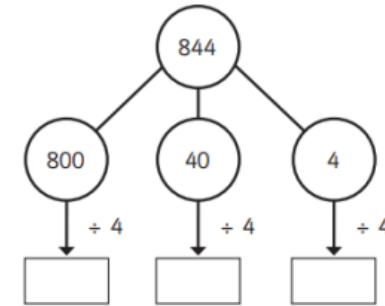
Vocabulary:

- Divide
- Division
- Divided by
- Share
- Groups of
- Exchange
- Partition
- Flexible partitioning
- Inverse
- Ten times smaller

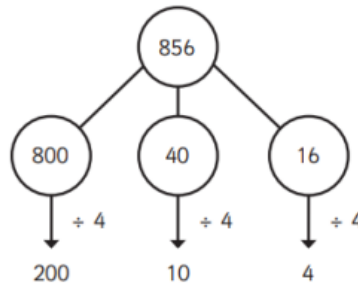
$$844 \div 4 = 122$$



H	T	O
100 100	10	1
100 100	10	1
100 100	10	1
100 100	10	1



$$844 \div 4 = 122$$



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

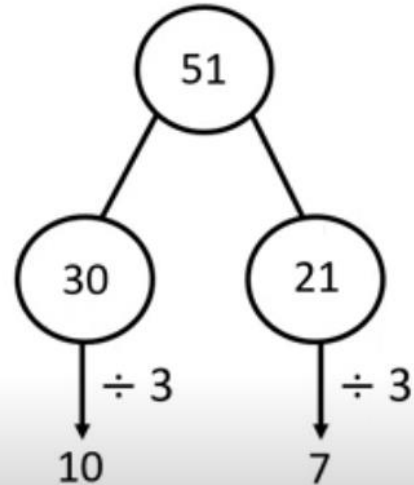
Year: 4

Children can continue to use place value counters to share 3-digit numbers into equal groups. Children should start with the equipment outside the place value grid before sharing the hundreds, tens and ones equally between the rows. This method can also help to highlight remainders. Flexible partitioning in a part-whole model supports this method.

DIVISION:

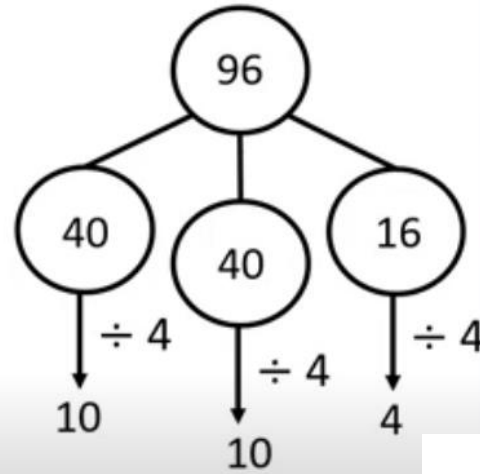
Using flexible partitioning to divide 2 digit and 3 digit numbers by 1 digit.

$$51 \div 3 = 17$$

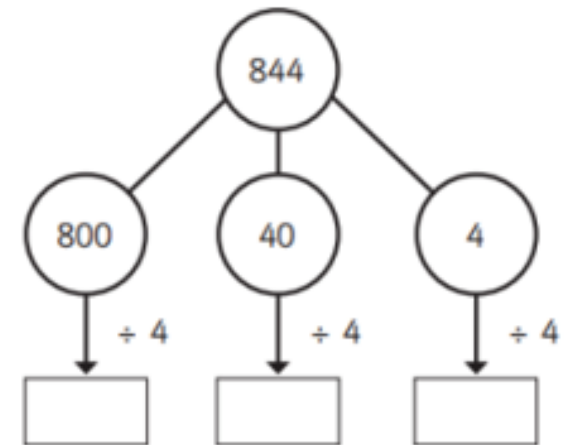


$$10 + 7 = 17$$

$$96 \div 4 =$$



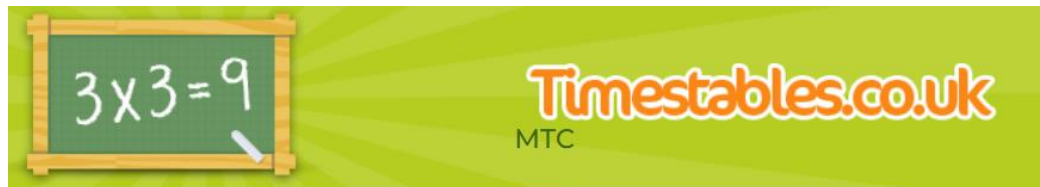
$$10 + 10 + 4 = 24$$





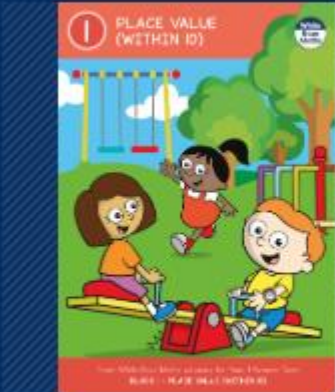
SUPPORTING AT HOME:

<https://www.timestables.co.uk/multiplication-tables-check/>



White Rose parent workbooks for Years 1 - 6 give children and parents an extra tool for enjoying maths together.

If you would like these to support any topics/units, please speak directly to your child's class teacher.

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
					
Autumn Block 1 Place value (within 10)	Autumn Block 2 Addition and subtraction (within 10)	Autumn Block 3 Shape	Autumn Block 4 Place value (within 20)	Spring Block 1 Addition and subtraction (within 20)	



QUESTIONS
