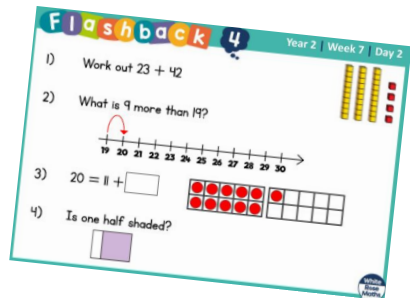




# Maths in Eyrescroft



Annie earns £1,325 per week.  
How much would he earn in 4 weeks?

Thousands	Hundreds	Tens	Ones
1	3	2	5
1	3	2	5
1	3	2	5
1	3	2	5

	T h	H	T	O
	1	3	2	5
×				4

©White Rose Maths



Times tables



Daily 5 minute activities.



To ensure high standards of teaching and learning in Maths, we use White Rose throughout the school, which is a revolving curriculum with strong links to the National Curriculum. White Rose is planned through small steps, each of the objectives are broken down into fluency, reasoning and problem solving activities.

We have daily Maths inputs which all children have access to. These lessons are delivered through White Rose and follow the guidance to ensure all areas are covered. Skills are taught in the sessions for children to then apply independently or with support during a variety of learning tasks.

## Notes and Guidance

Children begin by using stories which link to pictures and concrete manipulatives to explore making equal groups and write statements such as 'there are \_\_\_ groups of \_\_\_'. They will recognise and explain how they know when they are equal or not. Children see equal groups that are arranged differently so they understand that the groups look different but can still be equal in number.

At this stage children do not explore multiplication formally.

## Varied Fluency

Are the groups equal or unequal? Write a label for each.



Complete the sentences



Josh is drawing equal groups of 3



Complete his drawing.

5

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## Mathematical Talk

How do I know that the groups are equal? What does equal mean?

How many pencils are there in each pot? How can I complete the sentence to describe the groups?

What's the same and what's different?

Are Josh's groups equal or unequal? How can we make them equal?

T	O

## Reasoning and Problem Solving

### Always, Sometimes, Never?

Alex says,

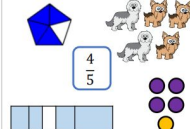
If I split a shape into 4 parts, I have split it into quarters.

Explain your answer.

Sometimes

If the shape is not split equally, it will not be in quarters.

Which representations of  $\frac{4}{5}$  are incorrect?



Explain how you know.

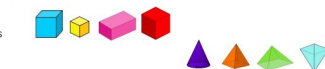
The image of the dogs could represent  $\frac{4}{5}$  or  $\frac{3}{5}$



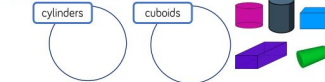
The bar model is not divided into equal parts so this does not represent  $\frac{4}{5}$



Circle the odd one out in each group.



Sort the shapes into the groups.



Which shapes will roll? Circle them. Which shapes with stack? Tick them.



## Flashback 4

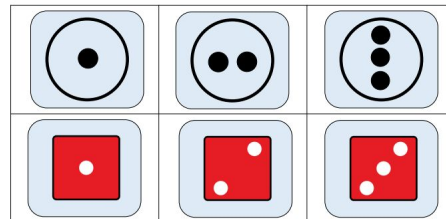
Year 5 | Week 2 | Day 2

CCCLII

- Find the missing number.  
 $64,350 = \underline{\hspace{1cm}} + 3,000 + 200 + 150$
- Round 40,593 to the nearest hundred.
- What are the coordinates of the point marked with a cross?
- Work out  $\frac{9}{11} - \frac{4}{11}$

## #MathsEveryoneCan

Cut out these cards and have a go at the memory game!  
Look out for those matches!



White  
Rose  
Maths

Concrete resources are out each lesson, children can also get their own out if they wish to use different resources. Pictorial representations are drawn in their books until this support is no longer needed..



**EYFS**

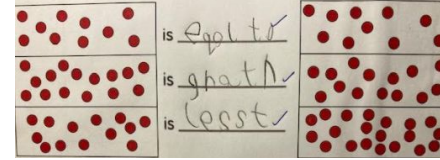
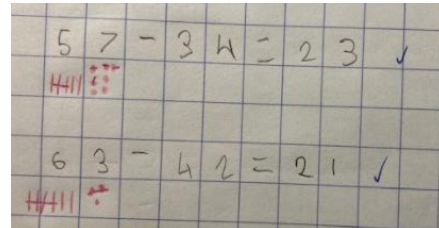
Children are given opportunities to reason and problem solve with open ended tasks within continuous provision and when appropriate in lessons.





# Key Stage 1

Concrete resources are out each lesson, children can also get their own out if they wish to use different resources. Pictorial representations are drawn in their books until this support is no longer needed.



To make equal groups we put two counters in each circle. There are eight counters in four circles altogether.

Teddy, year 1

We made seven towers with five cubes. Then we counted the number of towers to practice our 5 times tables.


$$7 \times 5 = 35.$$

Ava, year 2

# Key Stage 1

When appropriate every lesson has a reasoning and challenge element. This contains a mix of White Rose, test base and teacher generated questions.

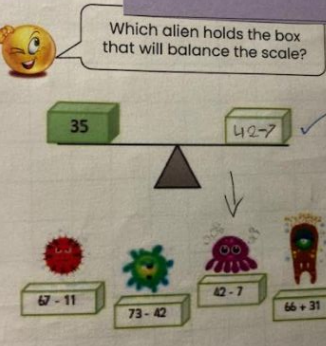
**CHALLENGE:**  
True or false...  
There are 10 pennies in total.



So there are 7 pennies in the money box.

*False*  
 $10 - 4 = 6$   
 $10 - 3 = 7$

Which alien holds the box that will balance the scale?



35      42-7 ✓

67-11      73-42      42-7      66+31

**NOW TRY THIS...**

Dexter is working out which symbol to use to compare the number sentences.

14 - 5    <    14 + 5

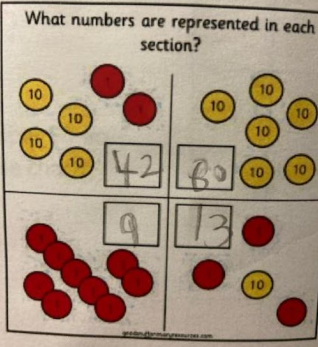
The missing symbol must be = because all of the numbers are the same.

Do you agree with Dexter?  
Explain why.

*No because 14 - 5 is smaller and 14 + 5 is bigger*

**NOW TRY THIS...** ✓

What numbers are represented in each section?



10 10 10 10      10 10 10 10  
10 10      10 10


42      60

9      13

**Extension Task**

Mollie had 27p. She spent 7p on a lollipop and 10p on a sherbet flying saucer.

How much did she have left?



How do you know?  
 $10 + 7 = 17$   
27 take away 17 is 10p. ✓

When added together, the numbers must total **more** than 68 but **less** than 71.

Match the numbers below and create two number sentences.

38      41      32      29

$41 + 29 = 70$  ✓  
 $38 + 32 = 70$  ✓

Here are three number cards. Place the cards in the number sentence.

2      3      5

Place the cards in the number sentence.

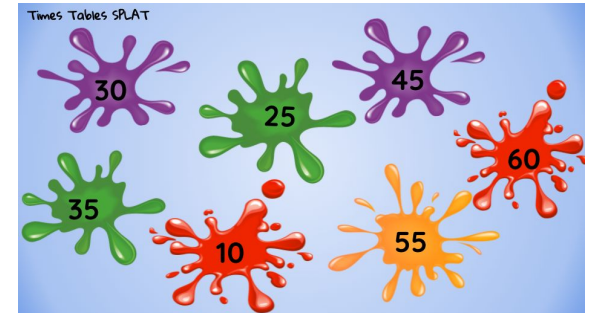
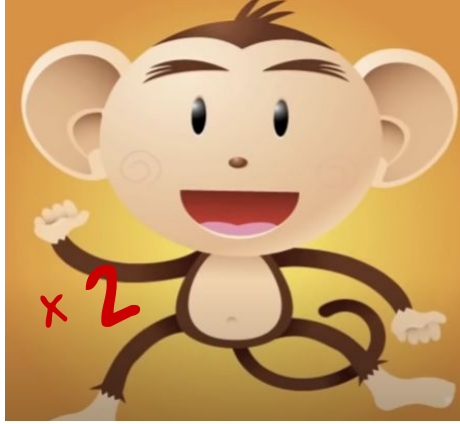
$23 + 5 = 28$  ✓

How many different total can you find?

$35 + 2 = 37$  ✓  
 $90 + 2 = 55$  ✓

# Key Stage 1

To promote fluency in times tables, each class has daily times tables activity.







# Key Stage 1

All classes complete Flashback 4 everyday. This aids fluency and allows children to apply their understanding to problem solving tasks. Teachers mark this with the children and address misconceptions straight away.

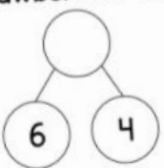
**Flashback 4** Year 1 | Week 10 | Day 1

1) Use  $>$  or  $<$  to compare.

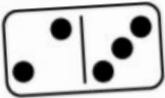
● ● ● ● ○ ● ● ● ● ● ● ● ●

2) Teddy   
Alex   
Teddy has \_\_\_ more strawberries than Alex.

3) What is the whole?

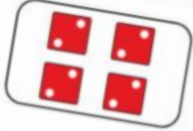




4) One more than 6 is \_\_\_

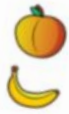
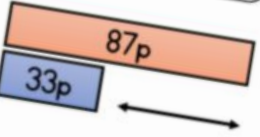


**Flashback 4** Year 2 | Week 11 | Day 3

1) Which show 2 equal groups with 4 in each group?

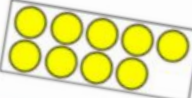
  

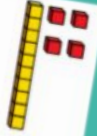
2) Find the difference.


 

3)  $43 - 8 = \square$

4) 9 is half of  $\square$







## Key Stage 2

All Year groups use manipulatives as needed to reinforce children's learning and cement abstract concepts in children's minds. As children become secure with concrete resources and can explain the step by step procedure they move towards more pictorial representation to support understanding. Where possible teachers use concrete, pictorial and abstract alongside each other, gradually withdrawing the support as children become more secure.



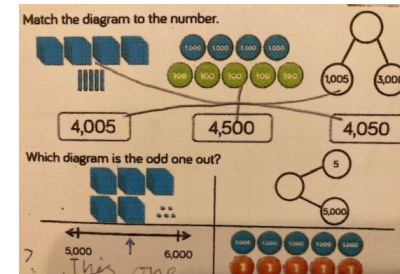
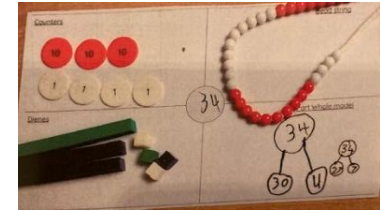
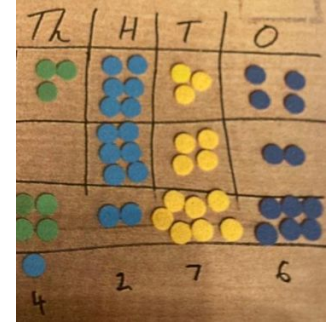
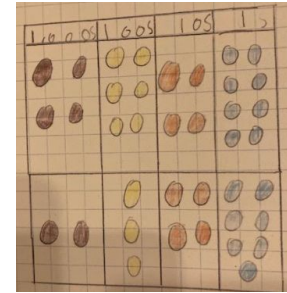
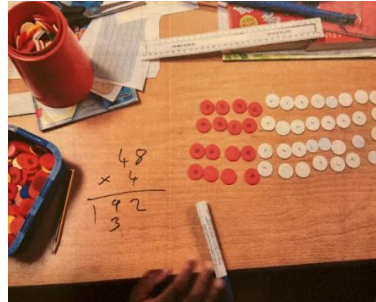
We use grids and Base 10 to help us multiply 2-digit numbers by 2-digit numbers.

Harry, year 5



We use place value counters to add and subtract 3-digit numbers. It made it easier to see how to organise the numbers into column method correctly.

Emilia, year 4





# Key Stage 2

Children often have the opportunity to reason and problem solve during lessons to activate and build prior knowledge and identify patterns and links between mathematical concepts.

Always, Sometimes, Never

I am thinking of a two-digit number, if I add ones to it, I will only need to change the ones digit.

Wait you have more than ten and you can't change the tens. Explain your answer.

What if you have more than ten tens? Is that the hundreds?

The translation from A to B is 1 right and 1 up.

Do you agree with Rosie? Explain your answer.

No to change the points that are to go together don't mix them.

Try this

To find the LCM of two fractions, you always multiply the denominators.

False because if you have  $\frac{1}{10} + \frac{3}{10}$  if you takes them together you get  $\frac{4}{10}$  but the LCM is 30.

Always, sometimes, never?

If one denominator is a multiple of the other you can simplify the fraction with the larger denominator to make the denominators the same.

Example:

Could  $\frac{2}{4}$  and  $\frac{7}{12}$  be simplified to  $\frac{2}{4}$  and  $\frac{7}{4}$ ?

Prove it.

Its sometimes correct

$\frac{2}{4}$  and  $\frac{8}{12} = \frac{2}{4}$  and  $\frac{2}{3}$

$\frac{2}{4}$  and  $\frac{6}{12} = \frac{1}{2}$  and  $\frac{1}{2}$

$\frac{2}{4}$  and  $\frac{3}{6} = \frac{1}{2}$  and  $\frac{1}{2}$

$\frac{2}{4}$  and  $\frac{5}{10} = \frac{1}{2}$  and  $\frac{1}{2}$

$\frac{2}{4}$  and  $\frac{1}{2} = \frac{1}{2}$  and  $\frac{1}{2}$

306 + 300 = 906 - 300

Alex

Is she correct? Explain how you know.

She is correct because  $3 \times 6 + 3 \times 0 = 606$  and  $906 - 300 = 606$

I know because I took away 300 from 906 and it = 606

2 wholes and 3 quarters  $\left( \frac{1}{4} \right)$  15 quarters

2 wholes and 3 sixths  $\left( \frac{1}{6} \right)$  15 sixths

2 wholes and 3 eighths  $\left( \frac{1}{8} \right)$  15 eighths

Tommy and Eva are comparing fractions.

Tommy: I found a common denominator of 36 to compare the fractions.

Eva: I found a common numerator of 4 to compare the fractions.

Tommy's way because its easier as he only has to multiply

Whose method is more efficient? Talk about your answer with a partner.

Now try this:

Amir, Dexter and Dora are counting in fractions.

Amir: The next fraction is  $\frac{12}{10}$

Dexter: The next fraction is  $1\frac{2}{10}$

Dora: The next fraction is  $1\frac{1}{5}$

Who is correct? Explain your answer.

Amir and Dexter are correct. Amir is counting in the same pattern which is  $\frac{1}{10}$  fractions. Dexter is doing a mixed pattern. Dora is equivalent although she's not in a fraction.

Three children have incorrectly converted  $3\frac{2}{5}$  into an improper fraction.

Annie:  $\frac{2}{5} = \frac{6}{15}$

Mo:  $\frac{2}{5} = \frac{15}{5}$

Dexter:  $3\frac{2}{5} = \frac{32}{5}$

What mistake has each child made?

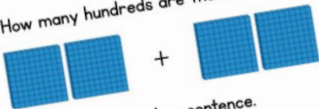
Annie did  $3 \times 2$  for the numerator and  $3 \times 5$  for the denominator. Mo got the first part right but forgot to add the extra  $\frac{2}{5}$ . Dexter moved the 3 to the 2's thirty two.

## Key Stage 2

All classes complete Flashback 4 everyday. This aids fluency and allows children to apply their understanding to problem solving tasks. Teachers mark this with the children and address misconceptions straight away.


**Flashback 4** Year 3 | Week 5 | Day 2

6 × 5

- 1) Subtract 3 tens from 452
- 2) How many hundreds are there altogether?  

- 3) Complete the number sentence.  
572 = 5 hundreds + \_\_\_\_ tens + 12 ones
- 4) How many half-turns are there in a full turn?

**Flashback 4** Year 4 | Week 8 | Day 5

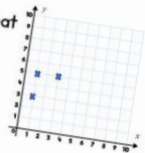

3 × 10

- 1) Calculate 34 cm + 60 mm.
- 2) Find the missing number:  
 $2,457 - \square = \square + 407$
- 3) Find how many exchanges there are when calculating  
 $6,932 + 2,358 = 9,290$  using column addition.
- 4) Do these hexagons have vertical lines of symmetry?  



White Rose Maths

**Flashback 4** Year 5 | Week 1 | Day 4

XVI

- 1) Round 3,452 to the nearest 10
- 2) Write the coordinates of the point that is needed to make a square.  

- 3) What type of triangle has 2 equal sides?  

- 4) Divide 6 by 10

**Flashback 4** Year 6 | Week 1 | Day 1

- 1) What is the value of the digit 7 in the number 10.75?  

- 2) What is  $36 \times 10$ ?
- 3) Work out  $\frac{1}{3} + \frac{5}{9}$
- 4) Write down a 4-digit number with 7 in the hundreds column.

White Rose Maths

# Key Stage 2

All children complete an end of block assessment when they have finished each topic. These are marked by the class teacher and any misconceptions are addressed to ensure children have made suitable progress.

Year 4

Addition and Subtraction

Name \_\_\_\_\_

1 Here is a number.

Thousands	Hundreds	Tens	Ones
4	3	5	2

- Subtract 3 ones
- Add 2 thousands
- Subtract 1 hundred

What is the new number? \_\_\_\_\_

2 Complete the missing digits.

		3		9
+	1	4	2	
	5		9	9

1 mark

2 marks

Year 3

Fractions

Name \_\_\_\_\_

1 Here are some shapes.

□	□	□	△	△	△	△	△
---	---	---	---	---	---	---	---

What fraction of the shapes are triangles? \_\_\_\_\_

2 Circle the unit fractions.

$\frac{1}{5}$	One eighth	$\frac{2}{5}$	$\frac{7}{8}$	$\frac{1}{6}$
---------------	------------	---------------	---------------	---------------

1 mark

1 mark

1 mark

2 marks

3 Complete the part-whole models.

<div>5</div> <div>3</div> <div>2</div>	<div>1</div> <div>3</div> <div>7</div>
--	--

4 Complete the number lines.

0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1	0 1 2 3 4 5 6 7 8 9 10
---	------------------------

2 marks

1 mark

1 mark

1 mark

1 Complete the additions.

a) $14 + 9 = 23$	d) $7 + 15 = 22$
b) $18 + 4 = 22$	e) $4 + 19 = 23$
c) $19 + 6 = 25$	f) $18 + 3 = 21$

2 Which two representations show 10? Tick your answers.

<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	-------------------------------------	--------------------------	--------------------------

What is the same about the two representations? What is different?

3 Complete the additions.

a) <table><tr><td>10</td><td>10</td><td>10</td><td>10</td><td>10</td></tr></table>	10	10	10	10	10	b) <table><tr><td>10</td><td>10</td><td>10</td><td>10</td><td>10</td></tr></table>	10	10	10	10	10
10	10	10	10	10							
10	10	10	10	10							

1 mark

1 mark

1 mark

1 mark

1 mark

1 mark

1 mark

1 mark

Year 6

Decimals

Name \_\_\_\_\_

1 Donna makes a number using some counters.

1	1	1	1	1	1	1	1	1	1
---	---	---	---	---	---	---	---	---	---

Complete the sentences.  
There are \_\_\_\_\_ ones, \_\_\_\_\_ tenths and \_\_\_\_\_ hundredths.  
Donna has made the number \_\_\_\_\_

2 In the number 32.8 which digit is in the ones place? \_\_\_\_\_  
In the number 32.8 which digit is in the tenths place? \_\_\_\_\_

3 What is 1,603 + 5 hundredths \_\_\_\_\_

1 mark

1 mark

2 marks

1 mark

1 Flip writes a number in a place value grid.

H	T	O	Th
		1	9

Flip multiplies his number by 10.  
Write down his answer in the place value grid below.

H	T	O	Th

Flip multiplies his starting number by 100.  
Write down his answer in the place value grid.

H	T	O	Th

2 Fill in the missing numbers.

$27 \div 10 =$	$25.4 \times 10 =$
$3.65 \times = 365$	

1 mark

1 mark

1 mark

1 mark

1 mark

1 mark

1 mark

1 mark

1 A packet costs £32.  
Eight packets each and three others cost £323.  
How much does a packet cost? \_\_\_\_\_

2 Some cards are shared between 7 boxes.  
There are 63 cards in each box and 4 left over.  
How many cards were shared between the boxes? \_\_\_\_\_

3 Work out  $25 \times 87 \times 4$ .  
Explain or show your method.  
 $25 \times 4 = 100$   
 $87 \times 100 = 8700$

2 marks

2 marks

2 marks

1 Calculate.

a) $5 \frac{3}{4} + \frac{1}{4} = 6$	b) $7 \frac{1}{2} - \frac{1}{2} = 7$
c) $8 \frac{1}{2} - \frac{1}{2} = 8$	d) $9 \frac{1}{2} + \frac{1}{2} = 10$

2 Draw arrows from each fraction to its position on the number line.

$\frac{36}{40}$	$\frac{33}{66}$	$\frac{21}{24}$
-----------------	-----------------	-----------------

3 Jerry read  $\frac{1}{4}$  of her book on Monday.  
She read  $\frac{1}{4}$  of the book on Tuesday.  
On Wednesday she reads the rest of the book.  
What fraction of the book did she read on Wednesday? \_\_\_\_\_

1 mark

1 mark

1 mark

1 Three friends share a chocolate bar.  
Liam gets  $\frac{1}{4}$ , Phil gets  $\frac{1}{4}$  and Matt gets  $\frac{1}{4}$ .  
Do they share the chocolate bar equally? Explain your answer.

2 A circle has an area of  $8\frac{1}{2}$  cm<sup>2</sup> and a triangle has an area of  $5\frac{1}{2}$  cm<sup>2</sup>.  
What is the area of the circle that is left? \_\_\_\_\_

1 mark

1 mark



# Key Stage 2

All children practise their times tables for 5 minutes at the start of every maths lesson.

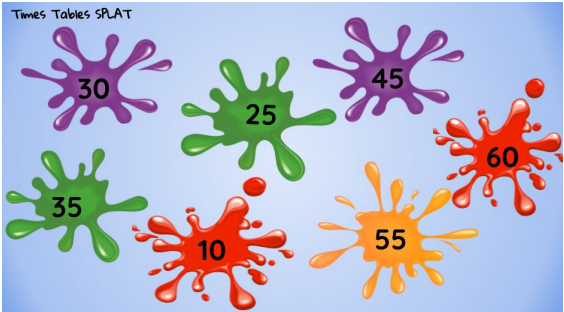
Year 3 practise 3s, 4s and 8s. Year 4 practise 6s, 7s, 9s, 11s & 12s.  
Children in Year 5 and 6 focus on times tables they have not yet mastered.



## Round the World

Two children next to each other stand up. The teacher calls out a question. Whoever shouts out the answer first stays on and challenges the next child.

Can anyone move all the way round the classroom and beat every child?



## The Sheriff Game

Two children stand up at the front, the teacher calls out a time table problem. The first child to say the answer and shout 'Yahoo!' while swinging a lasso over their head stays on to play for sheriff. Children take it in turns to stand up front. If anyone wins 3 consecutive rounds they are declared 'Sheriff'. How many Sheriffs can one class have?



## Bingo

Draw a bingo board on your whiteboard. Fill it with 6 products from one times table (EG: for the 3 times table you could write 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33 or 36). The teacher calls out a times table question (2x3), if you have 6 you cross it out. First person to cross out all their numbers is the winner.

