Maths

Multiplication and Division

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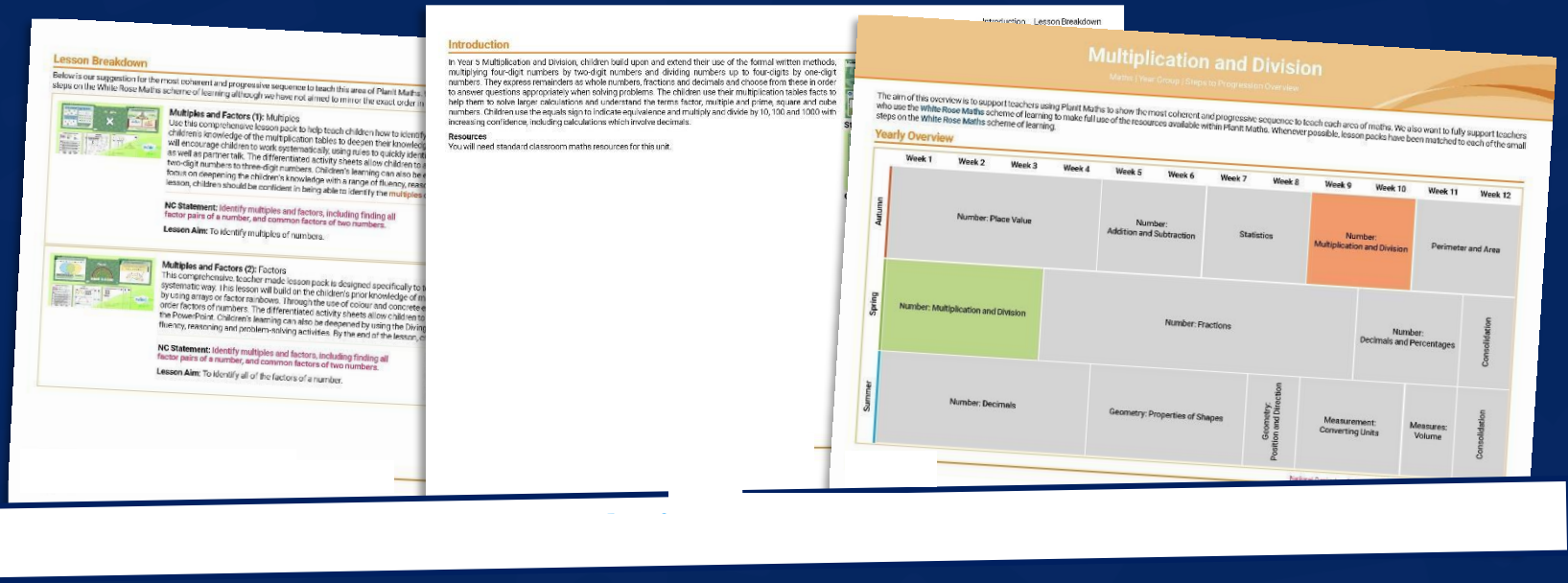
Need a coherently planned sequence of lessons to complement this resource?



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Divide 4 Digits by 1 Digit (With Exchanging)

	2	5	1	4
3	7	1 5	4	1 2

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Aim

- To divide 4-digit numbers by 1-digit numbers with exchanging.

Success Criteria

- I can set out the written method of short division correctly.
- I begin with the place value column of the greatest value, when dividing.
- I can exchange remainders.

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Remember It

Use your knowledge of the multiplication tables to help you solve these calculation ladders:

START	16
Halve it	= 8
add 17	= 25
divide by 5	= 5
Multiply by 20	= 100
Quarter it	= 25
Subtract 9	**= 16**

START	14
Add 13	= 27
divide by 9	= 3
multiply by 12	= 36
Quarter it	= 9
Multiply by 6	= 54
Subtract 40	**= 14**

Did you notice anything about these calculation ladders?
Can you make your own calculation ladder like this for a friend to solve?

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Dividing with Exchanging

Here is a division calculation. Let's look at how we can set it out using the written method of short division.

$4856 \div 4$

Dividend

Divisor

The divisor is written outside the frame.

The dividend is written inside the frame.

4	4	8	5	6

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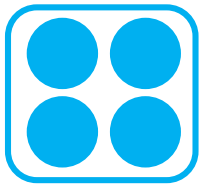
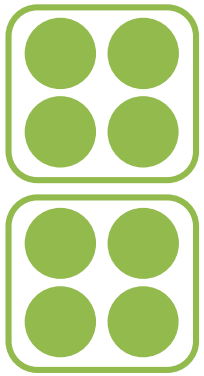
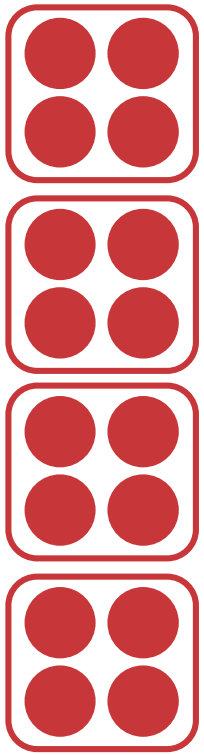
Dividing 3-Digit Numbers

4856 ÷ 4 = 1214

1000s	100s	10s	1s
			

We have used short division to calculate that 4854 ÷ 4 = 1214.

	1	2	1	4
4	4	8	5	$^{1}6$

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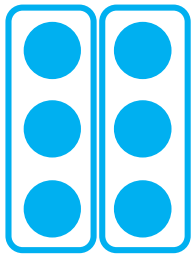
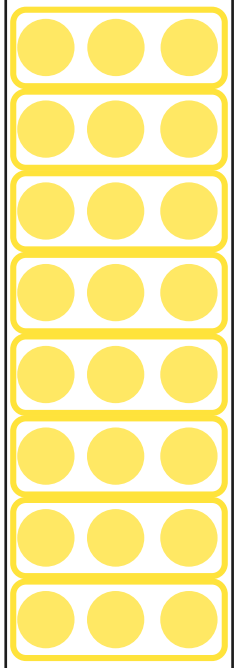
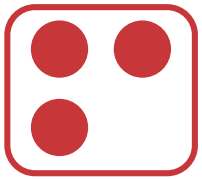
Dividing With Exchanging

6543 ÷ 3 = 2181

1000s	100s	10s	1s
			

Finally, the ones.

There is **1** group of 3 ones. We write the digit 1 in the ones column above the line.

We have used short division to calculate that 6543 ÷ 3 = 2181.

	2	1	8	1
3	6	5	$^{2}4$	3

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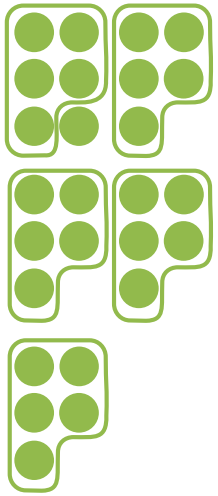
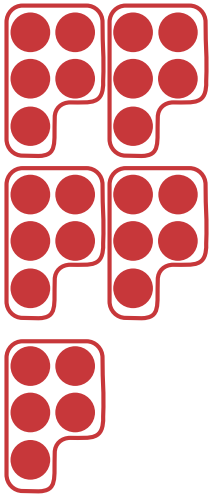
Division Challenge

2625 ÷ 5 = 525

1000s	100s	10s	1s
			

Finally group the ones.

There are **5** groups of 5 ones. We write the digit 5 in the ones column.

We have used short division to calculate that 2625 ÷ 5 = 525.

		5	2	5
5	2	6	$^{1}2$	$^{2}5$

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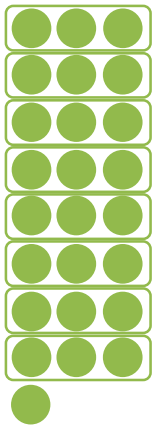
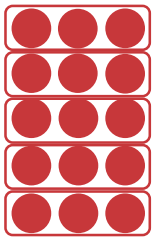
Division With Zero

2505 ÷ 3 = 835

1000s	100s	10s	1s
			

Finally, group the ones.

There are **5** groups of 3 ones. We write the digit 5 in the ones column.

We have used short division to calculate that 2505 ÷ 3 = 835.

		8	3	5
3	2	5	$^{1}0$	$^{1}5$

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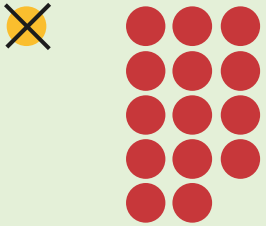
Exchanging Correctly

Bianca has completed this division calculation using short division.
Is she correct? Explain how you know.

	1	1	0	~~0~~ 2
7	7	7	1	1 4



I don't think I can make a group of 7 from 1 ten or 4 ones.

Bianca can exchange the ten for ten ones. Then she can make 2 groups of 7 in the ones column.

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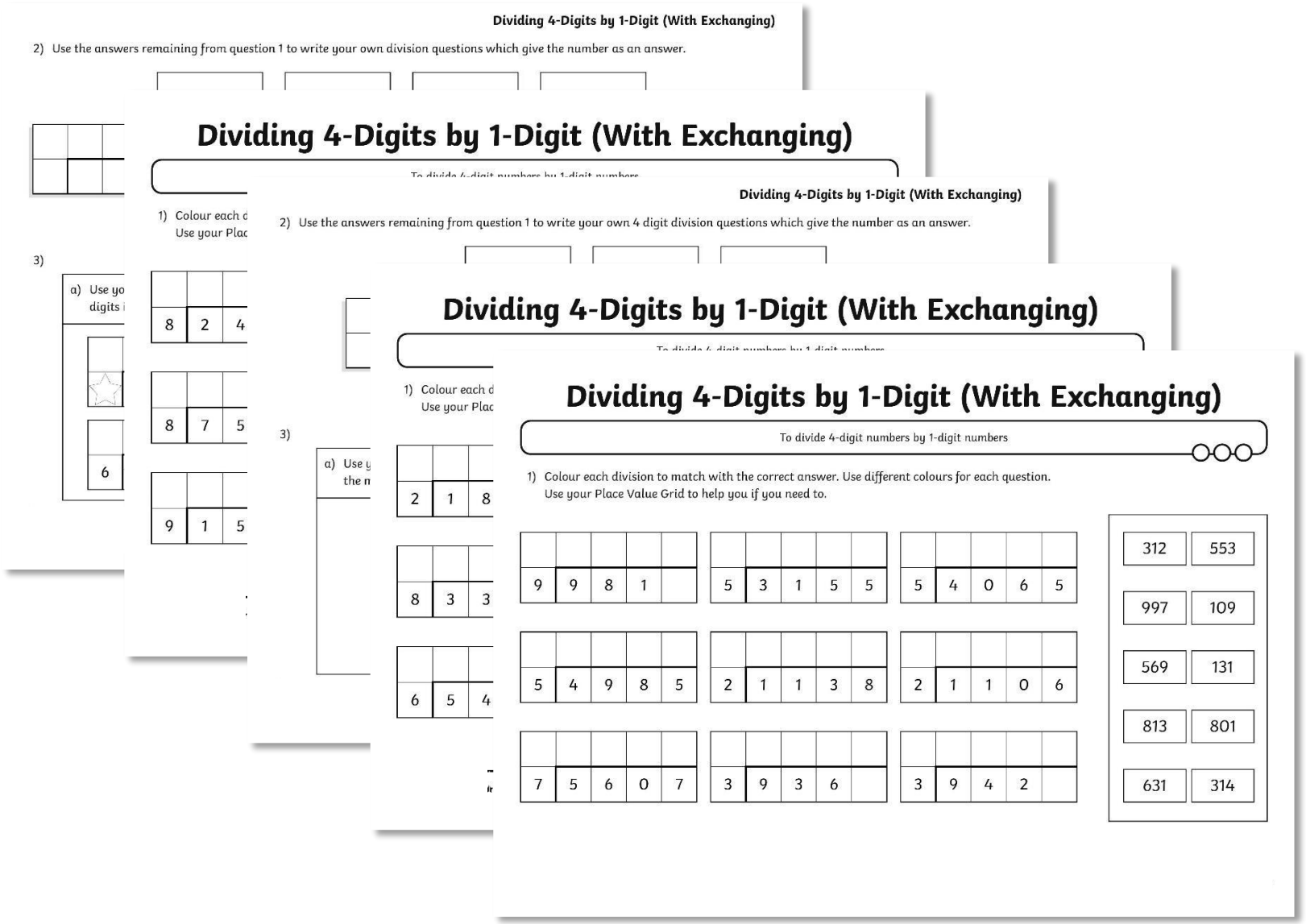
Multiply 4 digits by 1 digit



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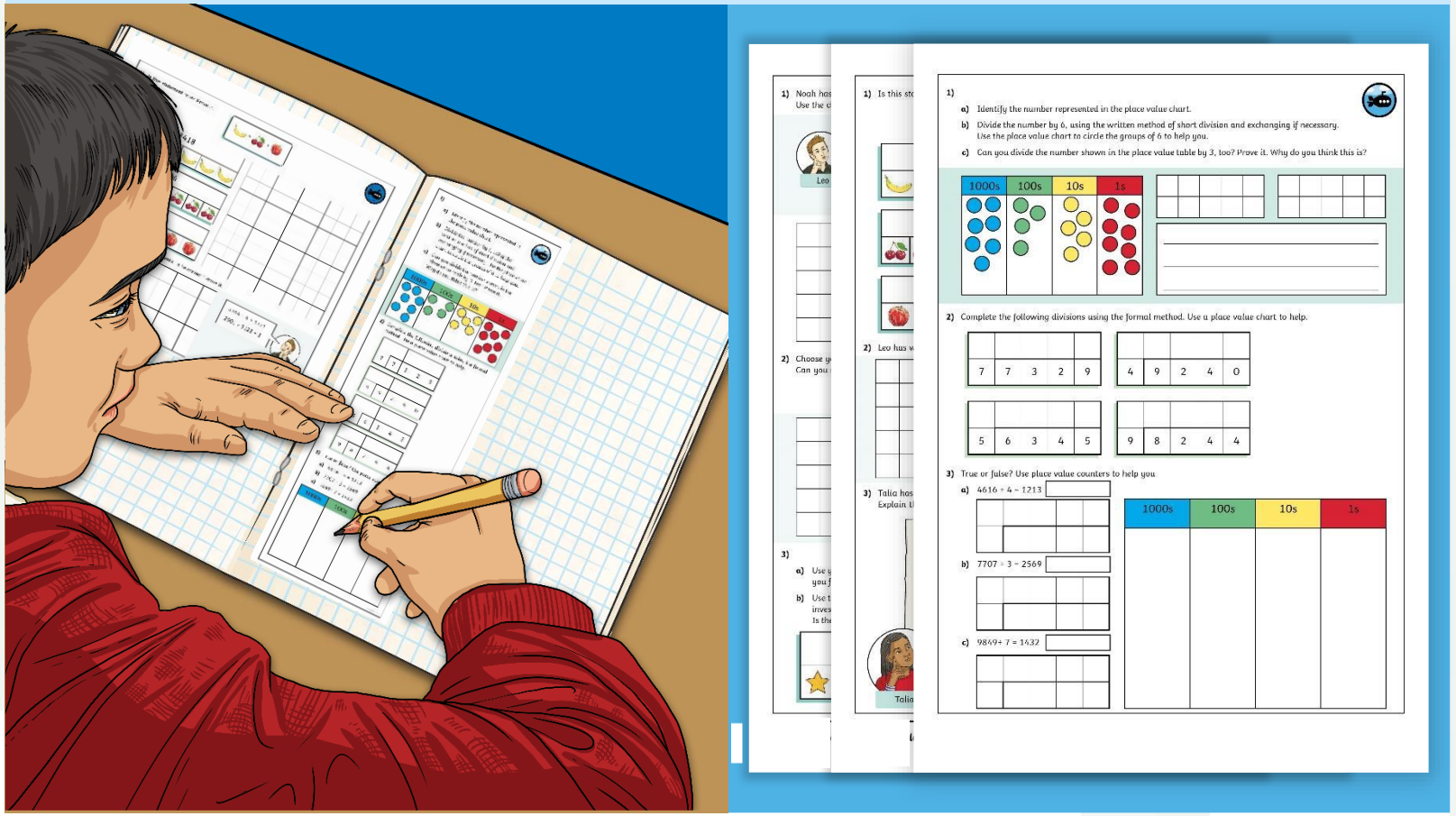
Diving into Mastery

Dive in by completing your own activity!



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Find the Missing Digits

Can you find the missing digits in this short division calculation?
There is more than one correct answer!

	□	4	□	0
5	□	3	0	□

	1	4	6	0
5	7	$^{2}3$	$^{3}0$	0

	0	4	6	0
5	2	$^{2}3$	$^{3}0$	0

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Aim

- To divide 4-digit numbers by 1-digit numbers without any exchanges.

Success Criteria

- I can set out the written method of short division correctly.
- I begin with the place value column of the greatest value, when dividing.
- I can exchange remainders.

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