Fully Recommended by the DfE!
POWER MATHS
The whole-class mastery approach that works for every child
Created in partnership with
White Rose Maths
Pearson
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At the heart of *Power Maths* is the belief that all children can achieve. It's built on an exciting growth mindset and problem-solving approach.

Pearson

Key aims of *Power Maths*

Keeping the whole class progressing together

Providing rich problem solving to challenge and engage every child

Practical assessment to reveal misconceptions and inform speedy interventions

Nurturing a growth mindset and building children's confidence in maths

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In a nutshell …

- An exciting **whole-class mastery approach** for Reception to Year 6
- Written by **mastery experts** and inspired by best practice from around the world
- Fully **recommended by the Department for Education**
- Created specifically for **UK classrooms**
- Makes maths an adventure and helps build a culture of **excitement and confidence**!

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What is mastery?

“Mastering maths means acquiring a deep, long-term, secure and adaptable understanding of the subject” – NCETM

We achieve this by …

- Carefully sequenced, small step learning
- Representation that expose mathematical structures
- Developing mathematical thinking
- Building fluency

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Growth mindset

Fixed mindset	Growth mindset
"I'm not good at maths – I've never been good at maths"	"I'm finding maths hard now, but I can improve with time and effort"
"I give up – I can't make this any better"	"I can improve if I keep trying"
"If I fail I am a failure"	"Most successful people fail along the way"
"I can't do this – I keep making mistakes"	"Mistakes help me learn"

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Meet the growth-mindset characters!

Flo

Flo is flexible and creative. She often with new methods to solve problems.

Dexter

Dexter is determined. When he makes a mistake he learns from it and tries again.

Can we do it differently?

Let's try again!

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Meet the growth-mindset characters!

Astrid

Astrid is brave and confident. She is not afraid to make mistakes.

I will share my ideas!

Is there a pattern?

Ash

Ash is curious and inquisitive. He loves to explore new concepts

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See the lesson structure

POWER UP! ▶ DISCOVER & SHARE ▶ THINK TOGETHER ▶ PRACTICE ▶ REFLECT

Same Day Intervention

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Discover and Share

Concrete-Pictorial-Abstract approach

Unit 7: Multiplication and division (2), Lesson 8

Dividing up to a 4-digit number by a 1-digit number 2

Discover

1 a) How many pieces of litter has each child picked up?

b) Mr Jones has picked up 351 pieces of litter. He shares them equally between 3 bags.

How many pieces of litter are in each bag?

36

Engaging scenarios

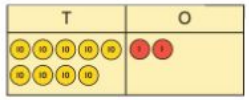
Share

a) 4 children picked up 92 pieces of litter.

They each picked up the same number of pieces.

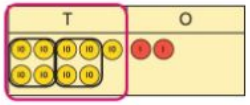
To work this out, I need to divide 92 by 4. I will use the method of short division that we learnt in the last lesson.

$4 \overline{)9\ 2}$



First, lay out the problem.

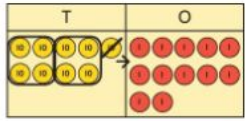
$4 \overline{)9\ 2}$ → 2



How many groups of 4 go into 9 tens?

2 groups of 4 tens with 1 ten left over.

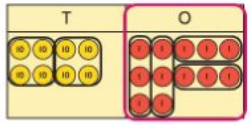
$4 \overline{)9\ 2}$ → 2



Exchange the 1 ten left over for 10 ones.

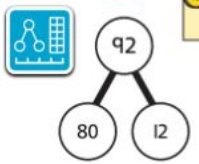
We now have 12 ones.

$4 \overline{)9\ 2}$ → 2 3



How many groups of 4 go into 12 ones?

3 groups of 4 ones.



I used a part-whole model to partition the number into two numbers that divide by 4.

$80 \div 4 = 20$ $12 \div 4 = 3$

$20 + 3 = 23$

$92 \div 4 = 23$, so each child picked up 23 pieces of litter.

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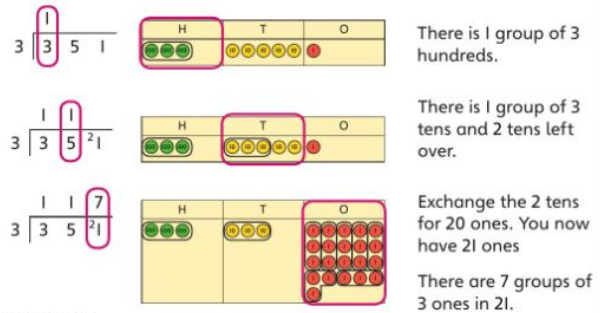
Think together

b) Mr Jones shares 351 pieces of litter equally between 3 bags.



351 ÷ 3 = 117

There are 117 pieces of litter in each bag.

Think together

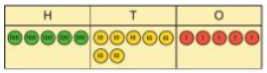
1 The children have a flask containing 575 ml of juice.

They share the juice equally among themselves and Mr Jones.

How much juice does each person get?

575 ÷ 5 = ☐

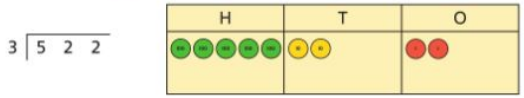
Each person gets ☐ ml of juice.



2 Complete these short divisions.

a) 726 ÷ 6 = ☐

b) 522 ÷ 3 = ☐



3 a) Look at these division problems.

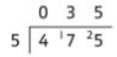
CHALLENGE

There are 312 eggs. How many boxes of 6 eggs can be made?	Divide 1,980 by 2	485 ÷ 5

What is different about these divisions compared with the ones you have been doing so far?

I think there is something different in the first step of each division.

b) Max tries to work out the third division problem. What mistake has Max made?



SB p27

Friendly, supportive characters help children develop a growth mindset.

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Practice

Questions are presented in a logical sequence.

→ Textbook 5B p36

Dividing up to a 4-digit number by a 1-digit number 2

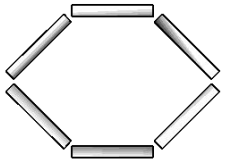
1 Mo is dividing 78 by 3. Complete his working.

3 | 7 8

T	O

78 ÷ 3 = ☐

2 Olivia is making hexagons with straws, like this:



Olivia has 96 straws. How many hexagons can she make?

6 | 9 6

T	O

Oliva can make ☐ hexagons.

3 Work out these divisions.

a) 642 ÷ 6 = ☐ b) 725 ÷ 5 = ☐ c) 5,016 ÷ 3 = ☐

6 | 6 4 2 5 | 7 2 5 3 | 5 0 1 6

4 Calculate the answers to these divisions.

a) 7,924 ÷ 7 = ☐ b) 711 ÷ 3 = ☐ c) 916 ÷ 4 = ☐

7 | 7 9 2 4

5 What division does this bar model model represent?

Write the calculation and then solve it.

2,454					

6 Isla has made a number and then divided her number by 4 using short division.

What mistake has Isla made?

0 8 7 9
4 | 1 ^{3}5 ^{3}1 ^{3}6

Th	H	T	O

7 Fill in the missing numbers in these short divisions.

a) 2 / 4 | ¹7 2

b) 2 2 / 3 | 8 7 3

c) 6 / 5 | ¹ ^{3}0

Calculations are connected so that children think about the underlying concepts.

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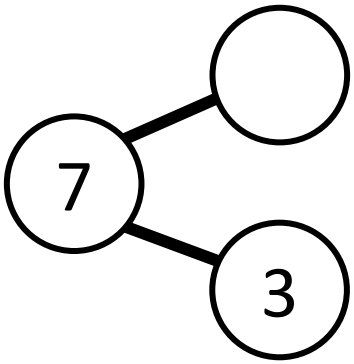
Models and representations

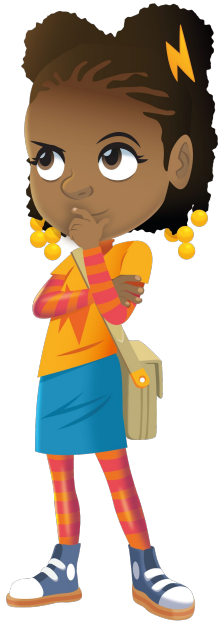
Part-whole models



Shows how numbers can be split into parts. Helps show the connection between addition and subtraction.

Bar models

Helps show the maths problem as a picture.



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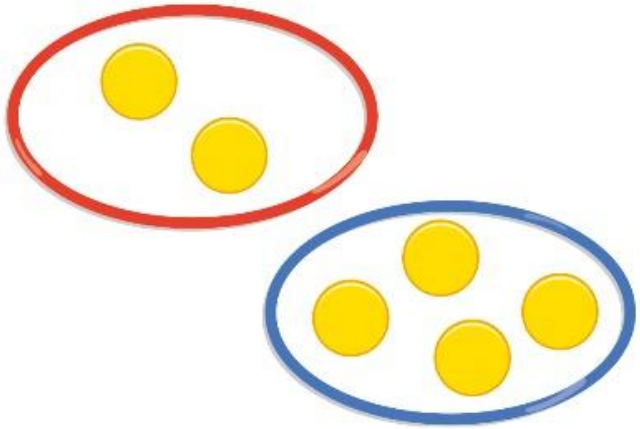
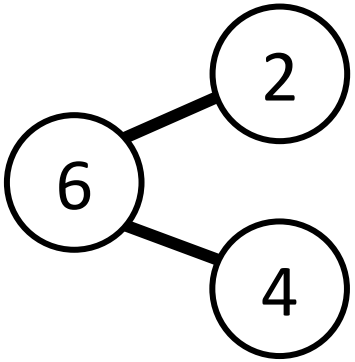
Models and representations





$2 + 4 = 6$

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POWER MATHS

MATHS IS AN ADVENTURE

Curious

Learn

Exciting

Learn

A0100