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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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.

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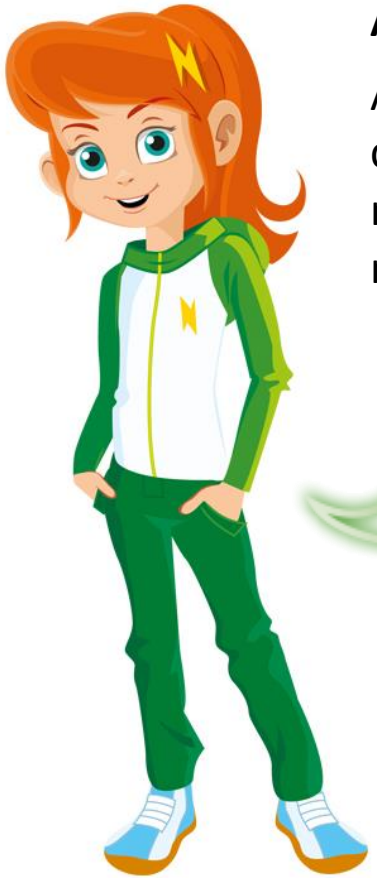
Meet the growth-mindset characters!



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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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

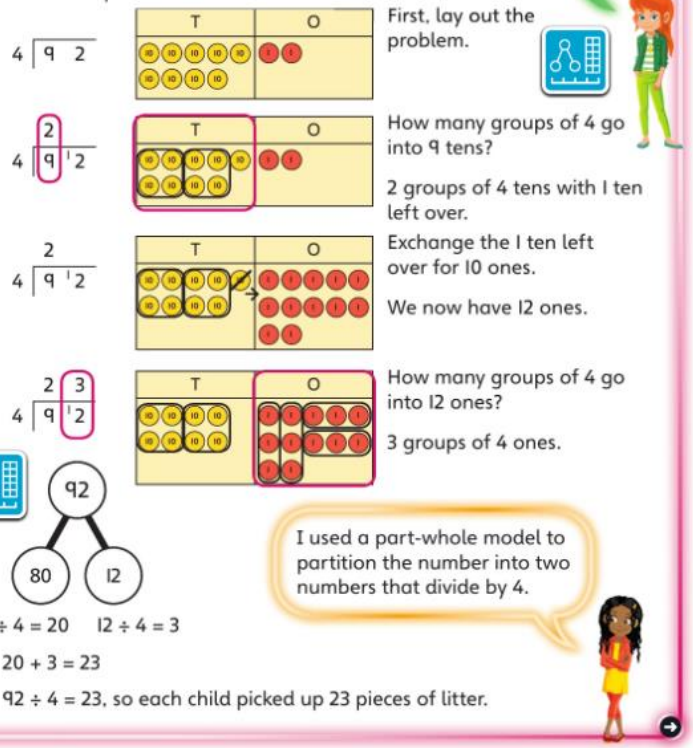
Engaging scenarios

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.



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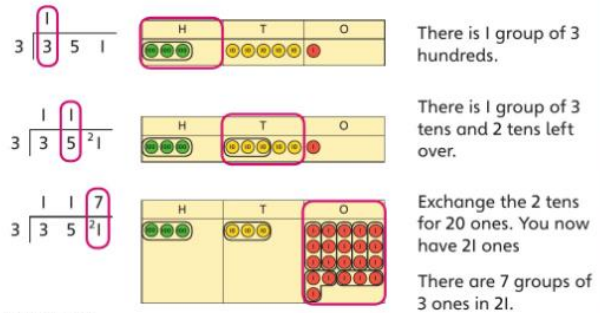
Think together

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



There is 1 group of 3 hundreds.

There is 1 group of 3 tens and 2 tens left over.

Exchange the 2 tens for 20 ones. You now have 21 ones

There are 7 groups of 3 ones in 21.

351 ÷ 3 = 117

There are 117 pieces of litter in each bag.

Think together

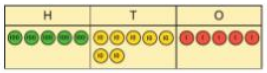
1 The children have a flask containing 575 ml of juice.

They share the juice equally among themselves and Mr Jones.

How much juice does each person get?

575 ÷ 5 = ☐

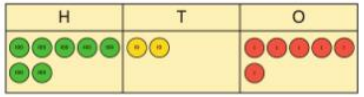
Each person gets ☐ ml of juice.



2 Complete these short divisions.

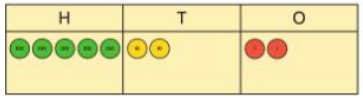
a) 726 ÷ 6 = ☐

6 | 7 2 6



b) 522 ÷ 3 = ☐

3 | 5 2 2



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?

5 | 4 17 25

0 3 5

SB p27

Friendly, supportive characters help children develop a growth mindset.

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Questions are presented in a logical sequence.

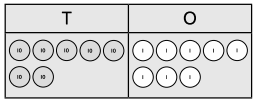
Practice

→ Textbook 5B p36

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

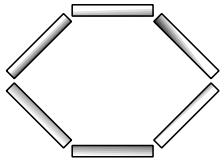
1 Mo is dividing 78 by 3. Complete his working.

3 | 7 8



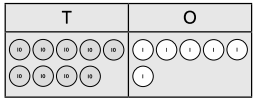
78 ÷ 3 = ☐

2 Olivia is making hexagons with straws, like this:



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

6 | 9 6



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

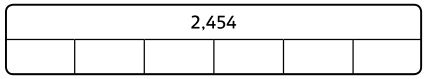
4 Calculate the answers to these divisions.

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

7 | 7 9 2 4

5 What division does this bar model model represent?

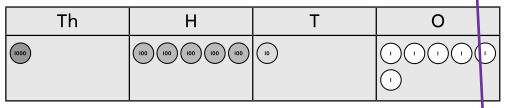
Write the calculation and then solve it.



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

What mistake has Isla made?

$$\begin{array}{r} 0\ 8\ 7\ 9 \\ 4\overline{)\,1\ {}^{3}5\ {}^{3}1\ {}^{3}6} \end{array}$$



7 Fill in the missing numbers in these short divisions.

a) $\begin{array}{r} 2 \\ 4\overline{)\,{}^{1}7\ 2} \end{array}$ **b)** $\begin{array}{r} 2\ 2 \\ 3\overline{)\,8\ 7\ 3} \end{array}$ **c)** $\begin{array}{r} 6 \\ 5\overline{)\,1\ {}^{3}0} \end{array}$

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

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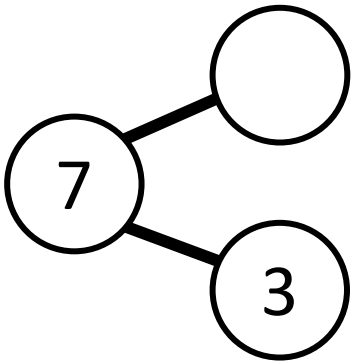
Models and representations

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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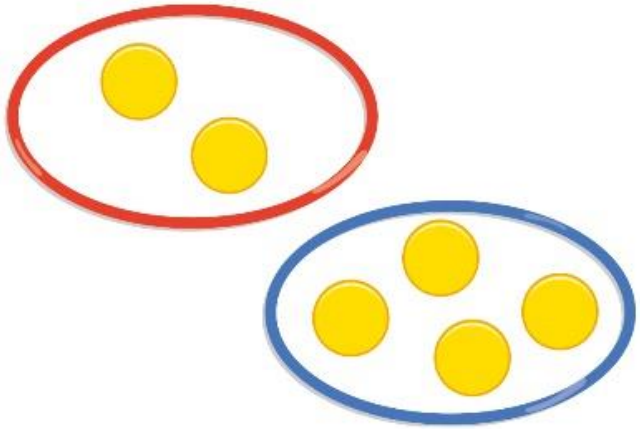
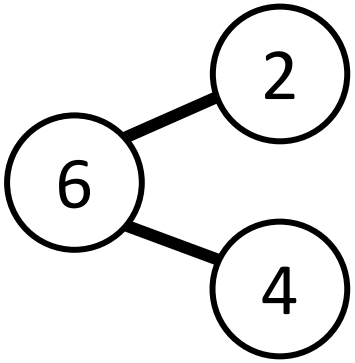
Models and representations





$2 + 4 = 6$

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POWER MATHS

MATHS

IS AN ADVENTURE

Curious

Learn

Exciting

Learn

A0100