

Fully  
Recommended  
by the DfE!

**The whole-class mastery approach  
that works for every child**

Created in  
partnership  
with



Pearson



**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.**

# 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**

# 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!**

# What is mastery?

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

**We achieve this by ...**

Developing  
mathematical  
thinking

Carefully  
sequenced,  
small step  
learning

Building  
fluency

Representation  
that expose  
mathematical  
structures

# Growth mindset

## Fixed mindset

“I’m not good at maths – I’ve never been good at maths”

“I give up – I can’t make this any better”

“If I fail I am a failure”

“I can’t do this – I keep making mistakes”

## Growth mindset

“I’m finding maths hard now, but I can improve with time and effort”

“I can improve if I keep trying”

“Most successful people fail along the way”

“Mistakes help me learn”

# Meet the growth-mindset characters!

## Flo

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

Can we do it differently?



## Dexter

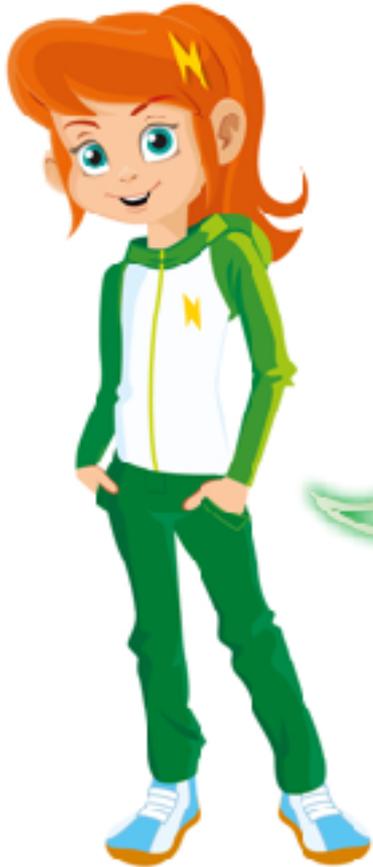
Dexter is determined. When he makes a mistake he learns from it and tries again.

Let's try again!

# Meet the growth-mindset characters!

## Astrid

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



I will share my ideas!

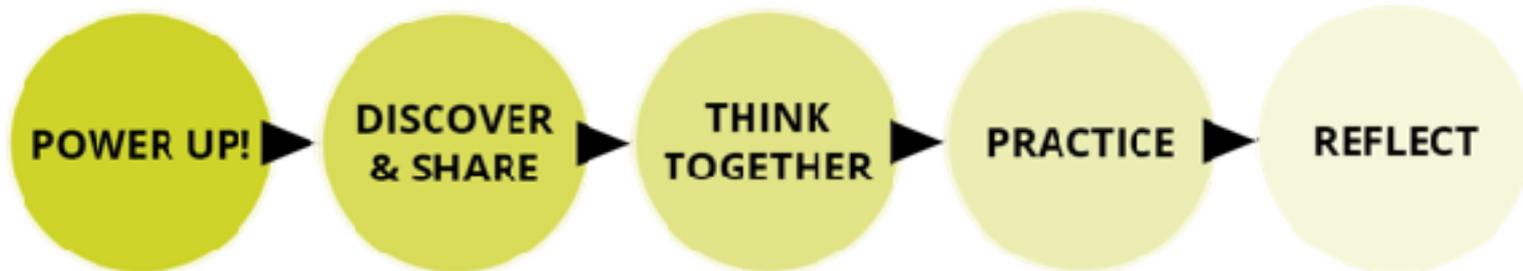
Is there a pattern?

## Ash

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



# See the lesson structure



Same Day Intervention



# Discover and Share

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

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



### Discover



- How many pieces of litter has each child picked up?
- Mr Jones has picked up 350 pieces of litter. He shares them equally between 3 bags. How many pieces of litter are in each bag?

36

Engaging scenarios

Concrete-Pictorial-Abstract approach

### Share

- 4 children picked up 92 pieces of litter. They each picked up the same number of pieces.

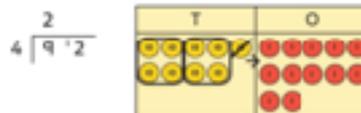
To work this out, I need to divide 92 by 4. I will use the method of short division that we learnt in the last lesson.



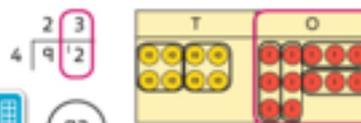
First, lay out the problem.



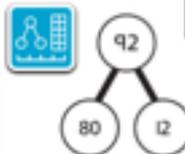
How many groups of 4 go into 9 tens?  
2 groups of 4 tens with 1 ten left over.



Exchange the 1 ten left over for 10 ones. We now have 12 ones.



How many groups of 4 go into 12 ones?  
3 groups of 4 ones.



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

$$20 + 3 = 23$$

92 ÷ 4 = 23, so each child picked up 23 pieces of litter.

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





# Practice

Questions are presented in a logical sequence.

1 Textbook 22 206

1188 11 Multiplication and Division (1) Section B

1188 11 Multiplication and Division (1) Section B

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

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

	T	O
3		

$78 \div 3 = \square$

2 Olivia is making hexagons with straws, like this:



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

	T	O
6		

Olivia can make  hexagons.

3 Work out these divisions.

a)  $642 \div 6 = \square$       b)  $725 \div 5 = \square$       c)  $5,016 \div 3 = \square$

$6 \overline{) 542}$

$5 \overline{) 725}$

$3 \overline{) 5016}$

4 Calculate the answers to these divisions.

a)  $7,924 \div 7 = \square$

b)  $711 \div 3 = \square$

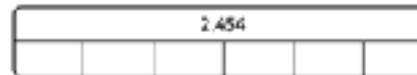
c)  $916 \div 4 = \square$

$7 \overline{) 7924}$



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?

$4 \overline{) 0879}$

Th	H	T	O

7 Fill in the missing numbers in these short divisions.

a)  $\begin{array}{r} 2 \\ 4 \overline{) 172} \end{array}$

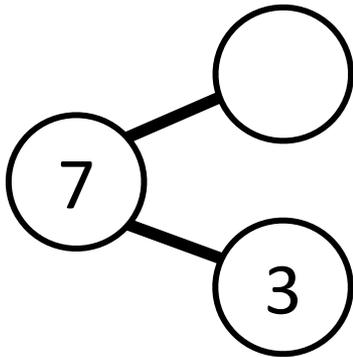
b)  $\begin{array}{r} 22 \\ 3 \overline{) 873} \end{array}$

c)  $\begin{array}{r} 6 \\ 5 \overline{) 110} \end{array}$

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

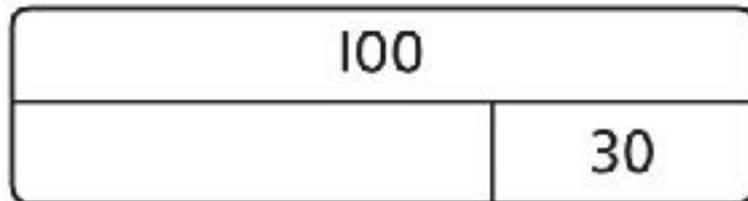
# Models and representations

## Part-whole models



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

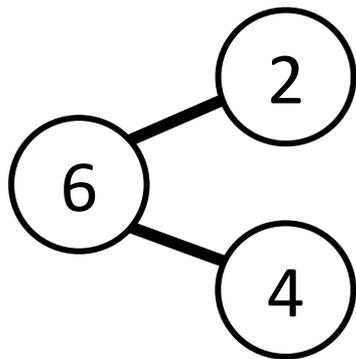
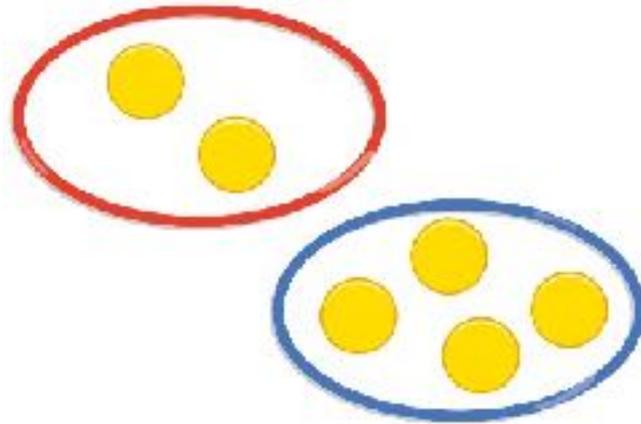
## Bar models



Helps show the maths problem as a picture.



# Models and representations



$$2 + 4 = 6$$



# MATHS

IS AN ADVENTURE



Learn

Exciting



Curious

Learn