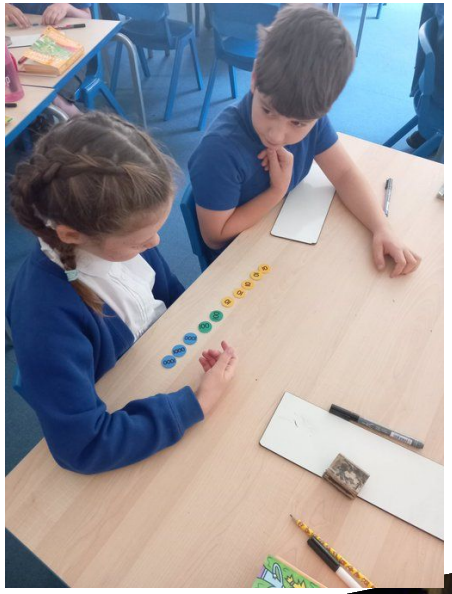
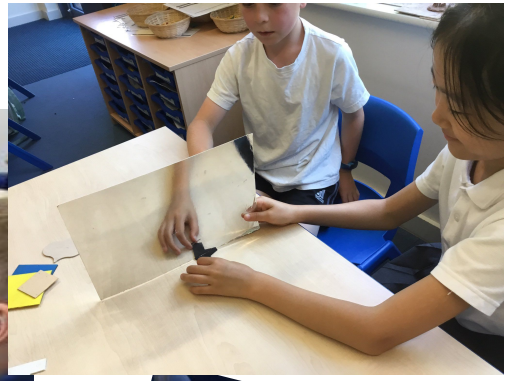
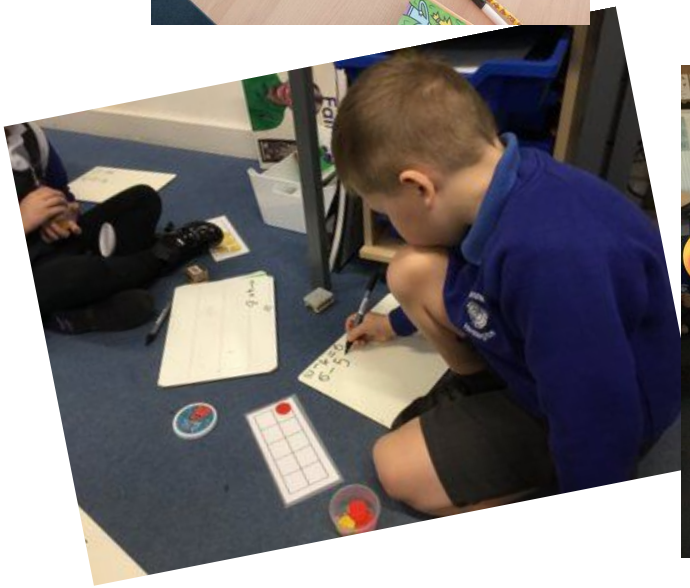
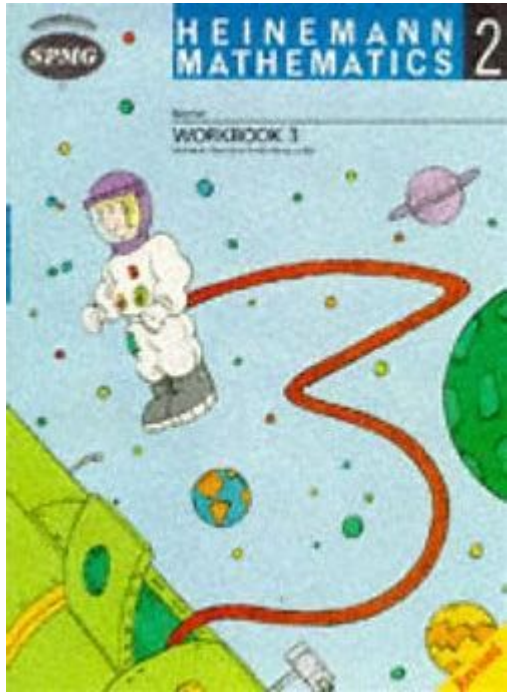
Maths at Lord Deramore's



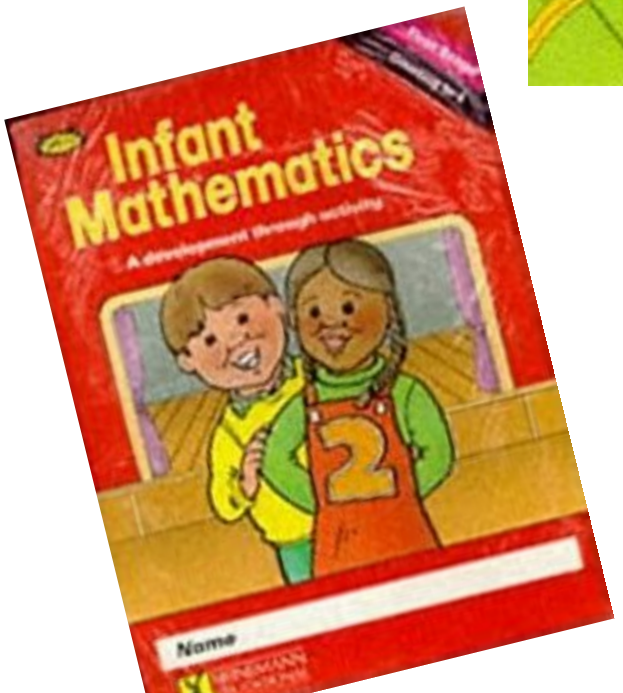


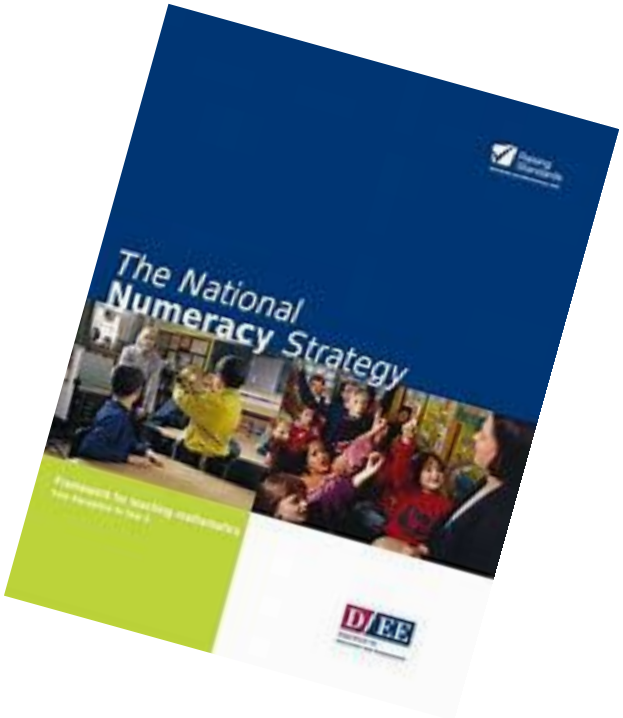


POWER MATHS


SPMG
HEINEMANN MATHEMATICS 2
WORKBOOK 3


SMP 7-13


Infant Mathematics
A development through activity
Name


The National Numeracy Strategy
DfEE

Place Value

Addition and subtraction

Number

Multiplication and division

Fractions, decimals and percentages

Shape

Position and direction

Geometry

Measures

Length, perimeter and area

Volume and capacity

Time and money

Fully Recommended by the DfE!

POWER MATHS

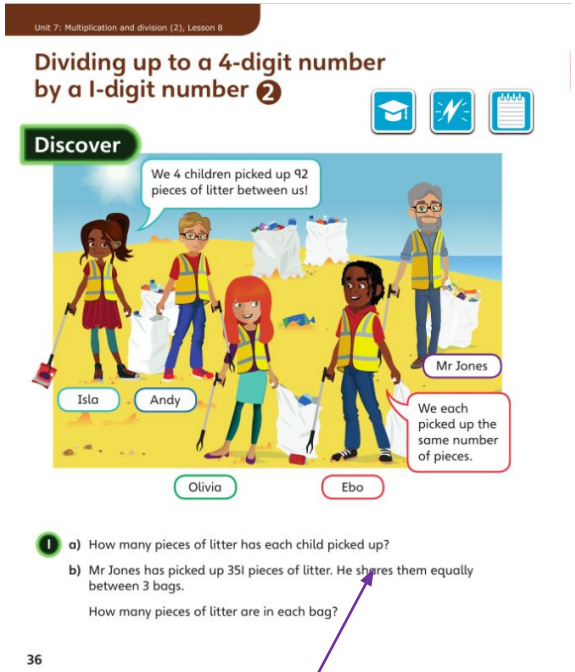
The whole-class mastery approach that works for every child

Created in partnership with White Rose Maths | Pearson

Power Maths is a whole-class, textbook-based mastery resource that empowers every child to understand and succeed. Power Maths rejects the notion that some people simply 'can't' do maths. Instead, it develops growth mindsets and encourages hard work, practice and a willingness to see mistakes as learning tools.

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

We 4 children picked up 92 pieces of litter between us!

Isla

Andy

Mr Jones

We each picked up the same number of pieces.

Olivia

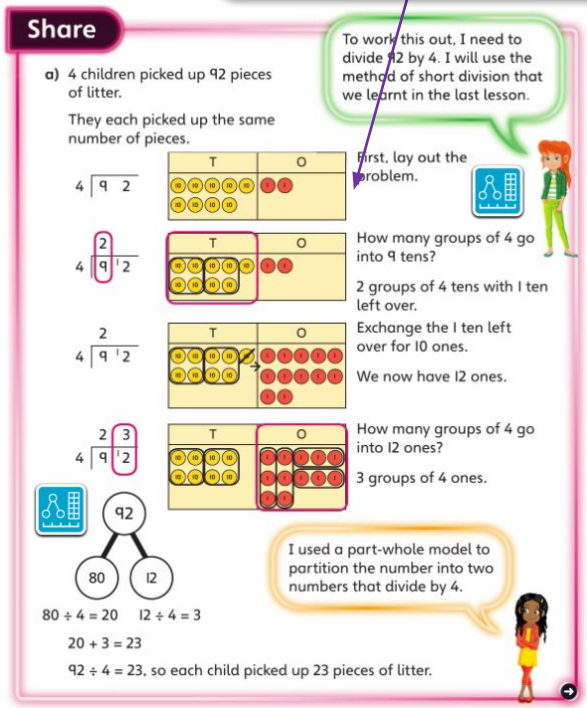
Ebo

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



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.

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.

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

92 → 80, 12

80 ÷ 4 = 20 12 ÷ 4 = 3

20 + 3 = 23

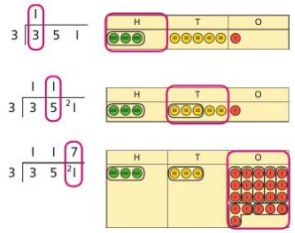
92 ÷ 4 = 23, so each child picked up 23 pieces of litter.

Engaging scenarios

Pearson

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

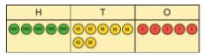
1 The children have a flask containing 575 ml of juice.

They share the juice equally among themselves and Mr Jones.

How much juice does each person get?

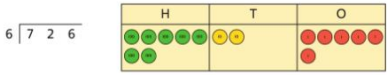
575 ÷ 5 = ☐

Each person gets ☐ ml of juice.



2 Complete these short divisions.

a) 726 ÷ 6 = ☐



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?

→ Practice book 5B p27

Practice

Questions are presented in a logical sequence.

→ Textbook 5B p36

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

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

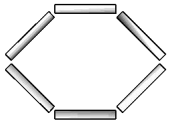
❶ Mo is dividing 78 by 3. Complete his working.

3 | 7 8

T	O
10 10 10 10 10 10 10	1 1 1 1 1 1 1 1 1

78 ÷ 3 = ☐

❷ Olivia is making hexagons with straws, like this:



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

6 | 9 6

T	O
10 10 10 10 10 10 10 10 10	1 1 1 1 1 1

Oliva can make ☐ hexagons.

❸ 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

27

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

❹ Calculate the answers to these divisions.

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

7 | 7 9 2 4

❺ What division does this bar model model represent?

Write the calculation and then solve it.

2,454					

❻ 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
1000	100 100 100 100 100	10	1 1 1 1 1 1 1

❼ Fill in the missing numbers in these short divisions.

a) 2
4 | ^{1}7 2

b) 2 2
3 | 8 7 3

c) 6
5 | ^{1} ^{3}0

28

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

Pearson

What you will see today:

- Whole class maths
- Part of the lesson (power up, discover and share, think together, practice)
- Paired talk
- Resources (wipe boards, counters, number lines …)
- Teacher modelling, scaffolding, independent (I do, we do, you do)
- Reasoning - how and why

Thank you for coming, enjoy seeing some maths in practise!