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Primary 2020

Mathematics

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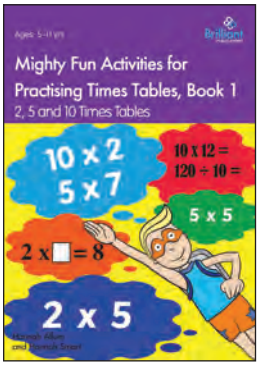
Get pupils ready for the Year 4 Times Tables Check



Practising Times Tables Book 1
978-1-78317-267-2
2, 5 and 10 Times Tables
54 pages. £17.50
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- *Mighty Fun Ideas for Practising Times Tables* is a three-book series that uses superheroes to motivate children to practise all of the skills needed to solve multiplication, division and word-based times table problems
- Superhero challenges will appeal to even the most reluctant of learners
- The enjoyable, reproducible worksheets are designed as flexible teaching aids
- The worksheets can be used in any order to support the learning of any tables
- Use as stand alone 5 to 20 minute lesson reinforcements or as regular times table learning
- Appeals to all types of learner. Practical activities develop understanding and written activities consolidate their knowledge
- The superheroes are based on the sporty characters in the whole-school reward-based scheme *The Mighty Multiples Times Table Challenge* (page 5)

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The Home Challenges provide practical and physical learning activities that can be assigned as homework. They have been designed to encourage parents to join in as their children develop their times table knowledge at home in an active way.

Throughout the catalogue this logo means the item is a reproducible resource

Set of three books
978-1-78317-270-2
£42.00 (save £10.50)

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Develop fluency with multiplication tables

NEW!

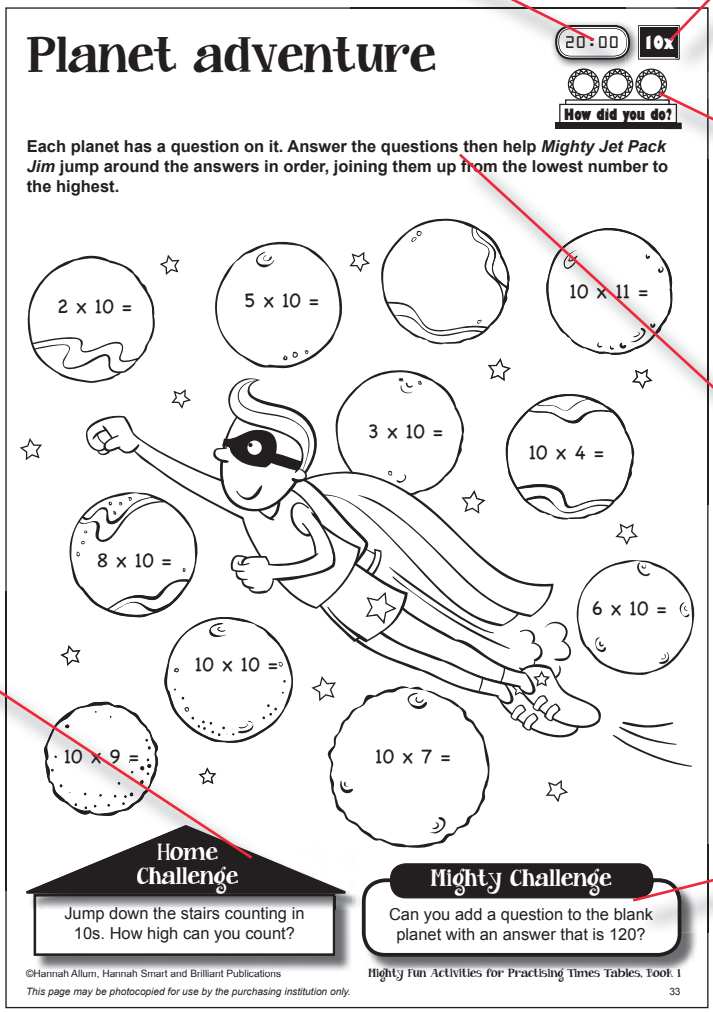
Approximate time needed to complete the main activity on the sheet. Children will feel a sense of pride and achievement if they can successfully beat the super villain.

Times table covered by sheet is clearly stated.

Children can self-assess how well they feel they have done by colouring in the circles:
1 circle = I need a bit of help please.
2 circles = I'm getting there.
3 circles = I've got it!

Clear instructions for completing the sheet.

The Mighty Challenges allow children to self-extend and apply the skills targeted during the activity even further.

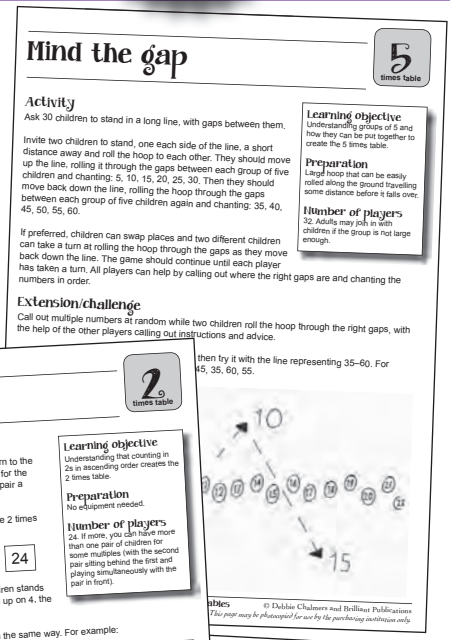


Have fun practising times tables skills

NEW!

Fun Games and Activities for Teaching Times Tables
978-1-78317-274-0
76 pages. £18.50
e-pdf £12.99

- Stimulating and imaginative games to make learning the times tables fun
- Games require minimal preparation so the flow of the lesson is not interrupted
- Pupils will learn fluency, recall and rapid and accurate application of times tables to problems
- 40 games are aimed specifically at learning the 2, 5 and 10 times tables
- A further 30 games are not table specific so you can challenge your pupils to:
  - learn each table in sequence
  - identify which table they are working on
  - learn the different factors that make up each answer



Mind the gap

5 times table

Activity

Ask 30 children to stand in a long line, with gaps between them.

Invite two children to stand, one each side of the line, a short distance away and roll the hoop to each other. They should move up the line, rolling it through the gaps between each group of five children and chanting: 5, 10, 15, 20, 25, 30. Then they should move back down the line, rolling the hoop through the gaps between each group of five children again and chanting: 35, 40, 45, 50, 55, 60.

If preferred, children can swap places and two different children can take a turn at rolling the hoop through the gaps as they move back down the line. The game should continue until each player has taken a turn. All players can help by calling out where the right gaps are and chanting the numbers in order.

Learning objective
Understanding groups of 5 and how they can be put together to create the 5 times table.

Preparation
Large hoop that can be easily rolled along the ground (travelling some distance before it falls over).

Number of players
32. Adults may join in with children if the group is not large enough.

Extension/challenge

Call out multiple numbers at random while two children roll the hoop through the right gaps, with the help of the other players calling out instructions and advice.

then try it with the line representing 35–60. For
45, 35, 60, 55.

Ups and downs

2 times table

Activity

Ask children to sit in a line across the floor, then to turn to the person beside them and hold hands to form partners for the game. Ask the children to shuffle a little to give each pair a separate space.

Call out the multiples that form the answers within the 2 times table, one number at a time. For example:

2 | 4 | 6 | 8 | 10 and so on to 24

Starting from the left of the line, the first pair of children stands up as they hear 2; the second pair of children stand up on 4, the third two children on 6 and so on to 24.

Then call out the whole multiplication statements in the same way. For example:

1 x 2 = 2 | 2 x 2 = 4 | 3 x 2 = 6 | 4 x 2 = 8 | 5 x 2 = 10 and so on to 12 x 2 = 24

This time each pair sits back down when they hear their statement.

Learning objective
Understanding that counting in 2s in ascending order creates the 2 times table.

Preparation
No equipment needed.

Number of players
24. If more, you can have more than one pair of children for some multiples (with the second pair sitting behind the first and playing simultaneously with the pair in front).

Extension/challenge

Ask children to say the numbers and the multiplication statements for themselves (with help from you or each other when necessary), as they stand up and sit down in the correct order.

count down

10 times table

k them to stand
m groups of 6,
number card for

oup of children
m. Child
r cards, 1 and
mber 2 walk to
ay: 2 x 10 = 20
ues to 60.

ups for
or numbers 9 and 10 (19 children) and for
n play, they can help with the chanting of
he floor together, ask the children what they

Learning objective
Visualising and practising counting on in tens in ascending and descending order to create the 10 times table.

Preparation
- ❑ Number cards 1–12
- ❑ 12 or 13 '0' (zero) cards.

Number of players
Ideally 36. If there are fewer children, adults may join in with the groups.

multiples, counting backwards. For example: 120, 110, 100, 90, 80, 70, 60, 50, 40, 30, 20, 10.

If desired, make an extra 0 card to bring out at the end and allow the children to count down to zero and blast off around the room as rockets!

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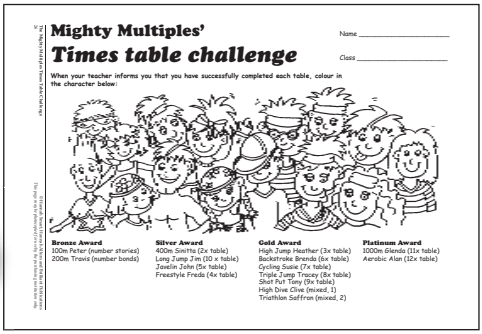
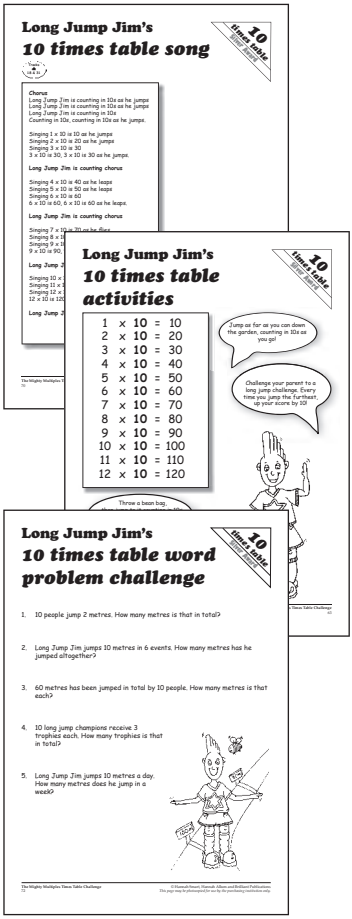
Multi-sensory approach to learning times tables

The Mighty Multiples Times Table Challenge
978-0-85747-629-6
180 pages
£37.99 (excl. VAT on CDs)

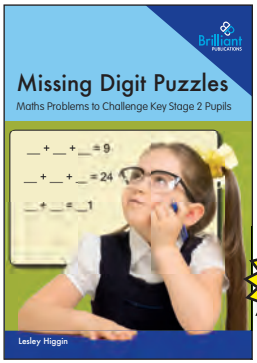
Best seller



- *Mighty Multiples* is a multi-sensory approach to learning the times tables that will appeal to all children:
  - Kinaesthetic activities form a central part of the scheme. Through activities such as the 3x table pathway and the long jump multiplication challenge, children will develop a firm, concrete understanding of the multiplication tables
  - Pupils will love the sporty characters associated with each times table. The visual grouping sheets, number fans, 144 board and bingo games will help them to visualize the times tables pictorially and develop mental pictures
  - Enjoy listening to and joining in with the songs and poems on the CDs. The catchy tunes and amusing rhymes will make learning the times tables easy.
- Problem solving is integral to *Mighty Multiples*, giving children practice using and applying their times tables in real life situations
- *Mighty Multiples* works best as a whole-school scheme. Present the in-built motivational rewards at assemblies and watch pupils strive to achieve their Bronze, Silver, Gold and Platinum Awards. The scheme starts with number stories, so even reception children can be involved
- Tip sheets for parents give ideas for practising times tables at the park or in the car, ensuring that learning the times tables is fun for the whole family!



Achieve maths mastery



Missing Digits Puzzles
978-0-85747-761-3
76 pages. £16.50
e-pdf £10.99

NEW!

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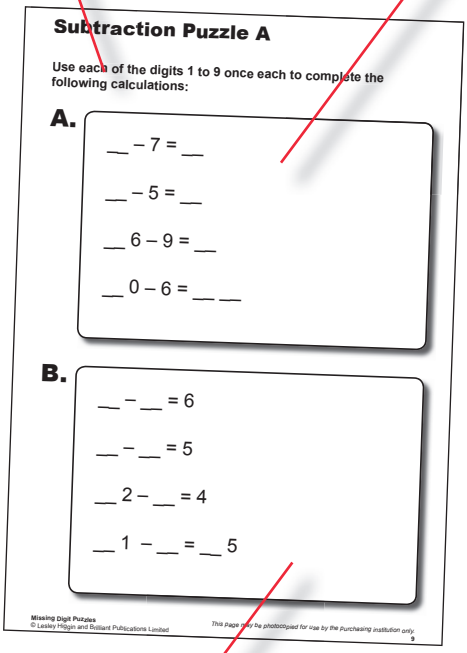
- Missing digit puzzles are a perfect way to challenge Key Stage 2 pupils and help them to achieve maths mastery
- Use the puzzles as starter activities, whole class problem solving or for stretching the more able
- The instructions for these puzzles are simple – fill in the gaps in the calculations using each digit provided only once
- The puzzles are designed so that there is one solution, but thousands of possibilities
- The puzzles cannot be solved by simply trying all the permutations – there are far too many
- Pupils will have to really think about the problem and use their knowledge and understanding of maths to decide which statements to fill in first
- The puzzles will develop and consolidate children's understanding of addition, subtraction, multiplication and division, as well as fractions, decimals, percentages and much more.

Which digits are to be used.

Use as a whole class puzzle or starter.



Subtraction Puzzle A

Use each of the digits 1 to 9 once each to complete the following calculations:

A.

__ – 7 = __

__ – 5 = __

__ 6 – 9 = __

__ 0 – 6 = __ __

B.

__ – __ = 6

__ – __ = 5

__ 2 – __ = 4

__ 1 – __ = __ 5

Missing Digit Puzzles
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Use for fast finishers or to reinforce maths skills.

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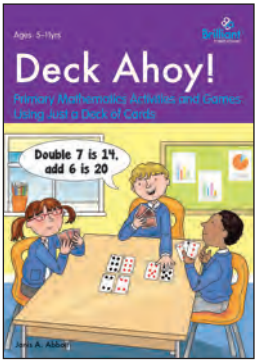
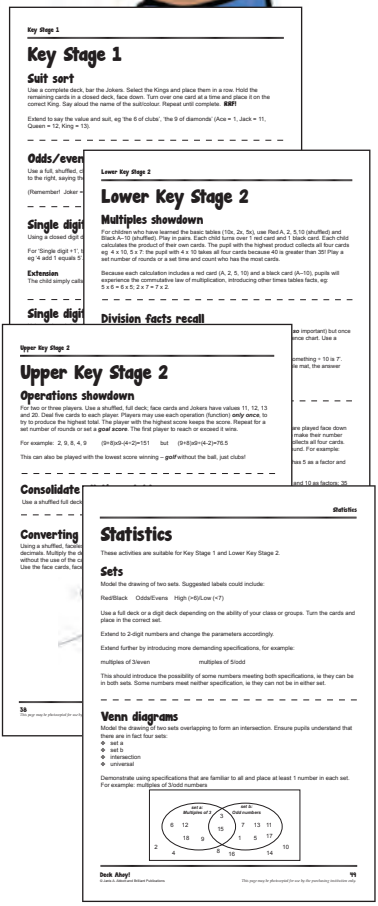
Teach primary maths skills using a deck of cards



Try the activities on the next pages. All you need is a deck of cards and your pupils' enthusiasm!

Deck Ahoy!
978-1-78317-178-1
56 pages. £18.50
e-pdf £12.99

- *Deck Ahoy!* contains over 100 activities and games to teach primary maths skills with **just a deck of cards**
- Contains activities to help children to practise, reinforce and consolidate key mathematical skills:
  - number and place value
  - addition and subtraction
  - multiplication and division
  - fractions and decimals
  - graphs and statistics
  - time
  - ratios
  - squares and cubes
- The ideas are great for homework. The whole family can get involved, any where, any time
- No worksheets needed (or marking to do!)
- Playing with cards really appeals to children, keeping them engaged and on task as they develop vital skills.
- Playing cards are readily available and cheap!


Key Stage 1
Key Stage 1
Suit sort
Lower Key Stage 2
Lower Key Stage 2
Multiples showdown
Division facts recall
Upper Key Stage 2
Upper Key Stage 2
Operations showdown
Statistics
Statistics
Sets
Venn diagrams

"This book is not only a valuable tool in a teacher's box of tricks, it is fun, easy to read and accessible to everyone. What shines through is that it has been designed, tested and enthused over by a skilled practitioner."
Headteacher of a Derbyshire school

Free deck of cards activity from Deck Ahoy!

Try these activities and have fun finding out how much pupils will love practising maths with a deck of cards – brilliant to set as homework.

Key Stage 1

Add the deck

Very simple in principle, this activity gives endless variety and differentiation. Use a faceless deck, shuffled and closed. Encourage pupils to use their knowledge of number bonds and number bonds to 10, to add quickly and accurately. It is more accurate and quicker for mental maths than counting on their fingers!

For example: 6 + 9 = 6 + 4 (10) + 5 = 15

7 + 5 = 7 + 3 (10) + 2 = 12

Variations

- Turn over 2 cards and add them (maximum 20).
- Turn over 2 cards and add them. Turn over the next card and add to the previous total. (Maximum to be set according to ability eg 30, 50, 100.)
- Turn over 2 cards and use as a 2-digit total – continue as before until the total is reached
- Add the complete deck in single digits.
- Competitive – each player turns over two cards, calculates the total and the player with the highest total collects all four cards.
- Teacher led/peer assessed – the teacher decides how many cards each pupil will turn over. Each child totals their cards, writes their answer and then swaps cards with a partner for assessment.

Extension

Extend the challenge for more able pupils by including the face cards and Jokers (11, 12, 13, and 20)

Simple subtraction

Turn over two cards. Place highest value to the left and read the two cards as a number sentence eg if the cards were 9 and 7: '9 take away 7 is 2' (9 – 7 = 2). Extend to 2-digits take away a single digit.

NB faceless, closed deck: cards Ace to 10, face down, closed together

RRF! ***Random and Rapid Fire*** **– This is the part the kids love the most. When they have practiced a skill to the point they are sure they can recall randomly and rapidly, shuffle the deck and turn over each card, one at a time, quickly as the child calls out the response.**

Rapid fire 100s and 1000s

Use a shuffled, digit deck to generate 3-digit numbers for pupils to read aloud. Children progress very quickly reading and partitioning bigger and bigger numbers. Year 3s can read 7 digits in no time at all and love the challenge of questions such as (7 546 921) 'what is the value of the 4?' or 'what is the largest number you can make with these digits?'

Written tasks are simple, effective and 'unique'. The number of digits should be set by the teacher according to the pupil's ability. The number can be written in numerals or words.

Place value - ordering/comparing

Use a shuffled digit deck and turn over three cards. Write the 3-digit number as it appears, in the middle of the line. Write the smallest number achievable to the left; write biggest number achievable to the right.

Tip

Because the written work is based on numbers only, encourage children to use letters rather than numbers to label each example, when writing in their books, eg:

(382) A 238 382 832

Multiplying by 10

Single digit numbers times 10. Use a shuffled, digit deck. **RRF!**

Then introduce J, Q, K (11, 12, 13) then the Jokers (20). Return to a digit deck before moving on to 2-digit and 3-digit numbers, for more able pupils. **RRF!**

NB digit deck: cards Ace to 9

All you need is a deck of cards!

Are your pupils improving their maths skills? Get more activities in 'Deck Ahoy!' Order on our website www.brilliantpublications.co.uk

Upper Key Stage 2

Doubling numbers with 1 decimal place

Use a shuffled, digit deck. Turn over three cards in a horizontal row. Turn the middle card face down to represent the decimal point. Record the number. Double the units. Double the tenths. Ensure pupils do not record 12 tenths as 12 hundredths. For example:

double 3.6 = 'double 3 is 6, double 6 tenths is 12 tenths or 1 and 2 tenths so double 3.6 is 7 and 2 tenths, 7.2'.

It may help some children to write the original number twice, in column form and add, carrying as in addition of whole numbers.

Extend more able pupils by using four cards eg 23.6, 45.9 etc. (Remember to keep one card face down as the decimal point.)

Halving numbers with 1 decimal place

As above. Ensure pupils understand that odd whole numbers will add 10 to their decimal value (ie add ten tenths.) For example: 'half of 2.8 is 1.4' but 'half of 3.8 is half of 2 plus half of 1.8', which is 1.9.

Divisibility tests

Although these have been covered before, they are worth revisiting with ever increasing numbers. Quick recognition of divisibility is a key skill in long division.

Test 2-digit numbers for divisibility. Test 3-digit numbers for divisibility. Use a shuffled deck, with the 10 and Jokers removed. The face cards can be turned down to represent zero.

Divisibility by 8

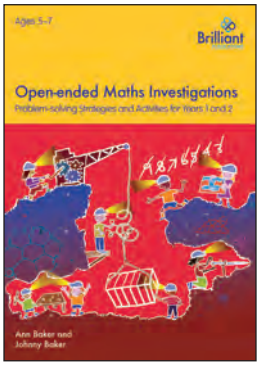
If the number is ***even***, find half. If the answer is ***even***, find half again. If the answer is ***even***, the number is divisible by eight.

Divisibility by 9

Add the digits together. If the answer is a product of the 9x table, the number is divisible by 9. (***Or***, if it can be divided by 3 and the quotient can be divided by 3 again.)

NB digit deck: cards Ace to 9

Develop problem solving strategies



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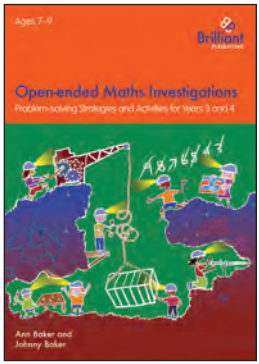

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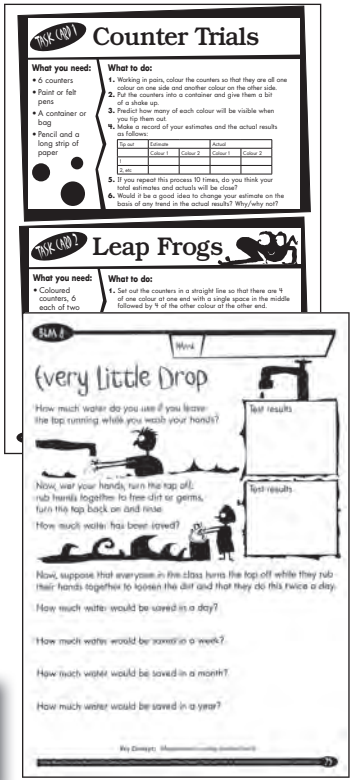

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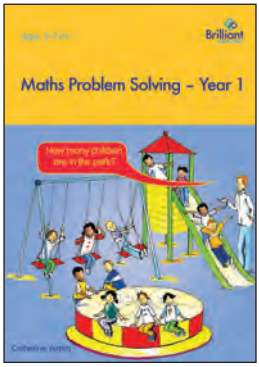

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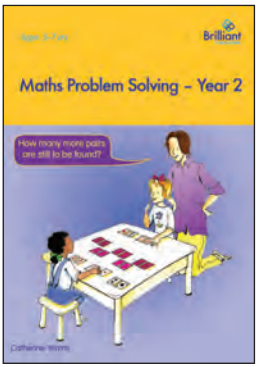

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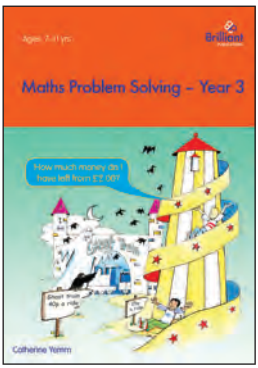

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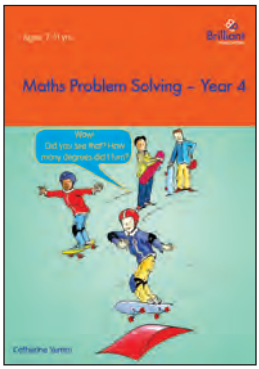

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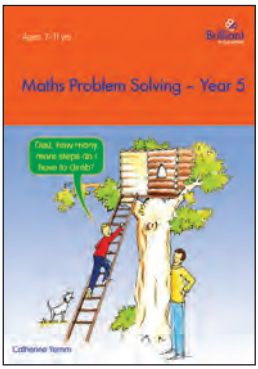

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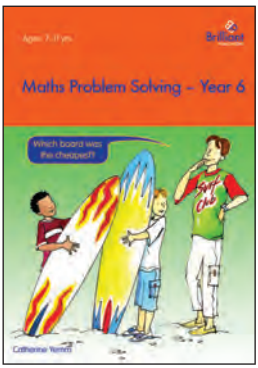

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- Develops problem solving skills and strategies, using a variety of 'real life' situations
- Differentiated sheets enable you to challenge the most able while providing additional support to those pupils who need it. Problems vary in complexity but the process remains the same, ensuring all children develop essential problem-solving skills
- Problems on each sheet vary in length and complexity
- Reinforces learning in number, measurement, geometry and statistics.

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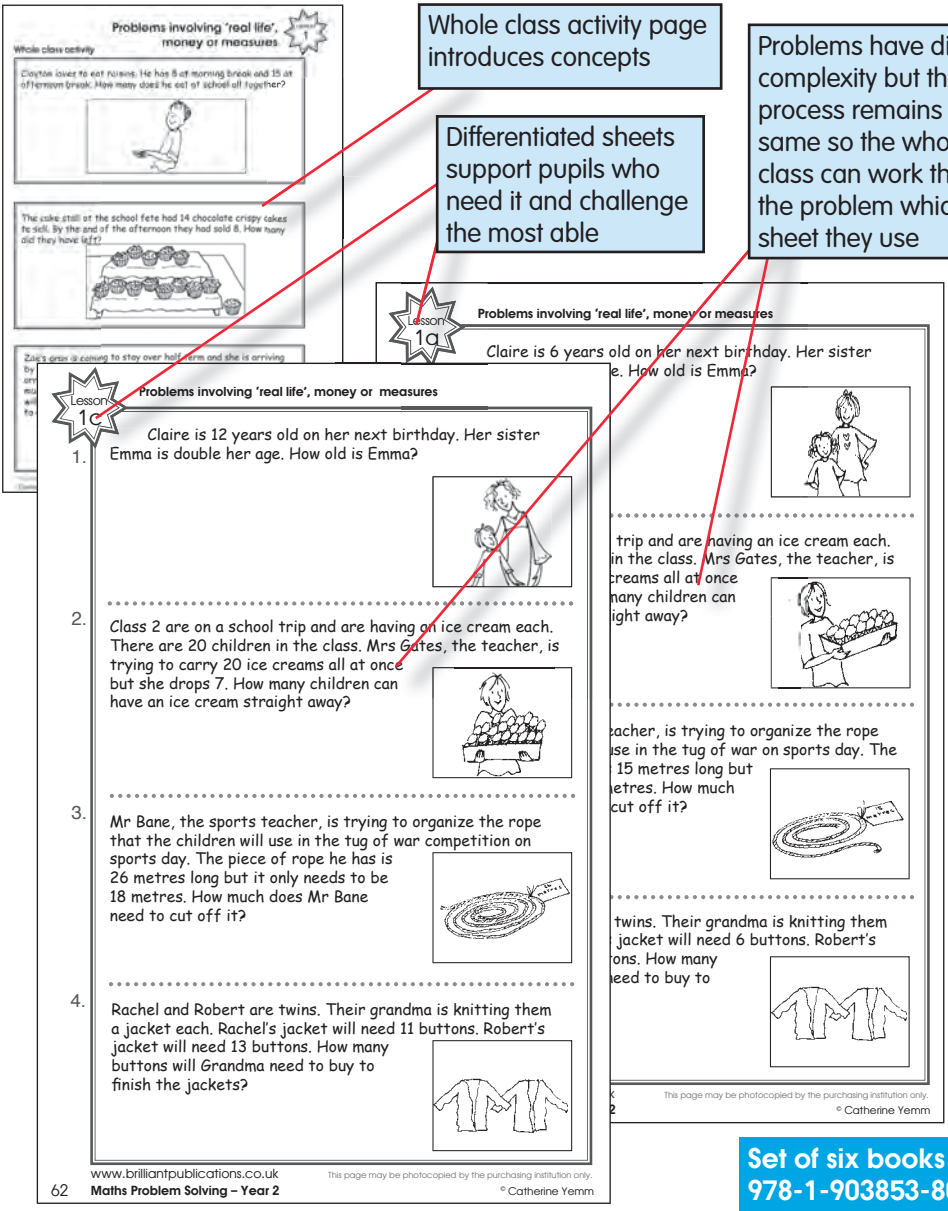
Whole class activity page introduces concepts

Differentiated sheets support pupils who need it and challenge the most able

Problems have different complexity but the process remains the same so the whole class can work through the problem whichever sheet they use



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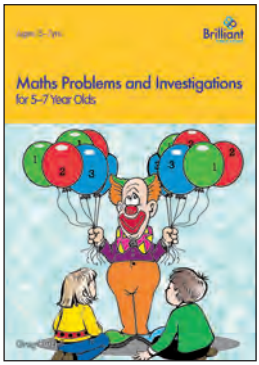
Maths problems and investigations



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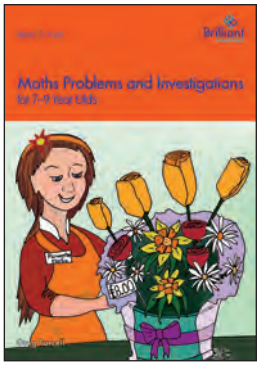

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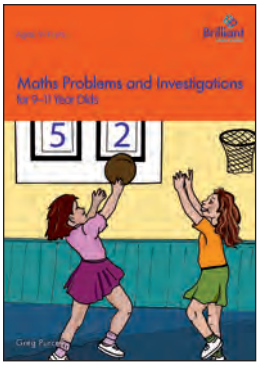

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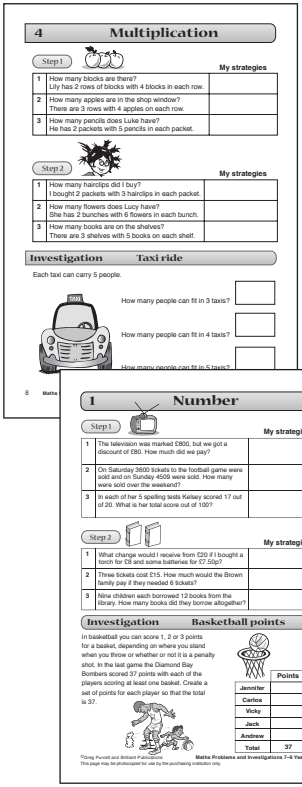
- Activities engage pupils in problem solving across all areas of mathematics, so it is easy to integrate them into your scheme of work.
- The activities and investigations help children to develop, reinforce and consolidate their problem-solving skills. To successfully solve the investigations children will need to demonstrate:
  - ability to think and work mathematically
  - knowledge of a range of mental and written strategies
  - overall competence in mathematics
- The three-step approach used on most sheets makes it easy to do mini-assessments, to check pupils understanding
- Each page has a focus, ranging from sports, shopping and jobs to cooking, travel and building – providing real-life problems for children to solve.


4 Multiplication

Step 1

My strategies

1 How many blocks are there? Lily has 2 rows of blocks with 4 blocks in each row.
2 How many apples are in the shop window? There are 3 rows with 4 apples on each row.
3 How many pencils does Luke have? He has 2 packets with 5 pencils in each packet.

Step 2

My strategies

1 How many hairclips did I buy? I bought 2 packets with 3 hairclips in each packet.
2 How many flowers does Lucy have? She has 2 bunches with 6 flowers in each bunch.
3 How many books are on the shelves? There are 3 shelves with 5 books on each shelf.

Investigation Taxi ride

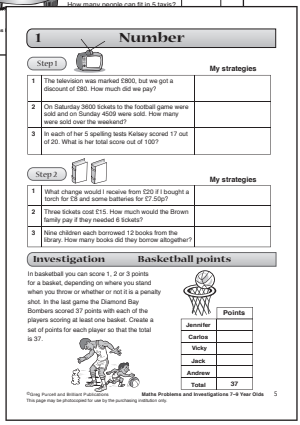
Each taxi can carry 5 people.

How many people can fit in 3 taxis?

How many people can fit in 4 taxis?

How many people can fit in 5 taxis?

8 Maths


1 Number

Step 1

My strategies

1 The television was marked £800, but we got a discount of £80. How much did we pay?
2 On Saturday 3600 tickets to the football game were sold and on Sunday 4509 were sold. How many were sold over the weekend?
3 In each of her 5 spelling tests Kelsey scored 17 out of 20. What is her total score out of 100?

Step 2

My strategies

1 What change would I receive from £20 if I bought a torch for £8 and some batteries for £7.50p?
2 Three tickets cost £15. How much would the Brown family pay if they needed 6 tickets?
3 Nine children each borrowed 12 books from the library. How many books did they borrow altogether?

Investigation Basketball points

In basketball you can score 1, 2 or 3 points for a basket, depending on where you stand when you throw or whether or not it is a penalty shot. In the last game the Diamond Bay Bombers scored 37 points with each of the players scoring at least one basket. Create a set of points for each player so that the total is 37.

	Points
Jennifer	
Carlos	
Vicky	
Jack	
Andrew	
Total	37

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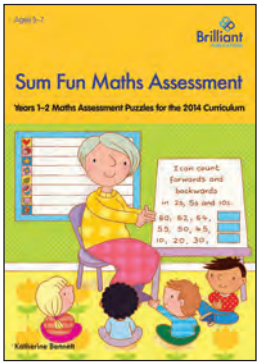

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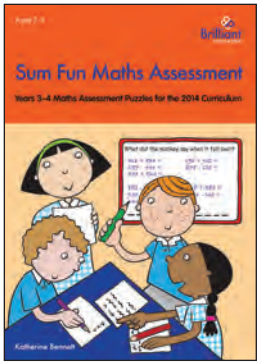

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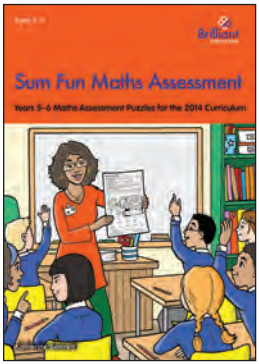

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  - addition and subtraction
  - multiplication and division
  - fractions
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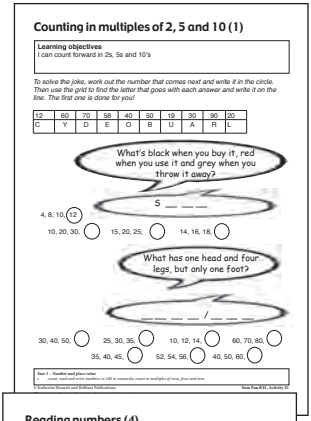

Counting in multiples of 2, 5 and 10 (1)

Learning objectives
I can count forward in 2s, 5s and 10's

To solve the joke, work out the number that comes next and write it in the circle. Then use the grid to find the letter that goes with each answer and write it on the line. The first one is done for you!

12	60	70	58	40	50	19	30	90	20
C	Y	D	E	O	B	U	A	R	L

What's black when you buy it, red when you use it and grey when you throw it away?

S ___ ___

4, 8, 10, 12

10, 20, 30,

15, 20, 25,

14, 16, 18,

What has one head and four legs, but only one foot?

___ ___ ___ / ___ ___ ___

30, 40, 50,

25, 30, 35,

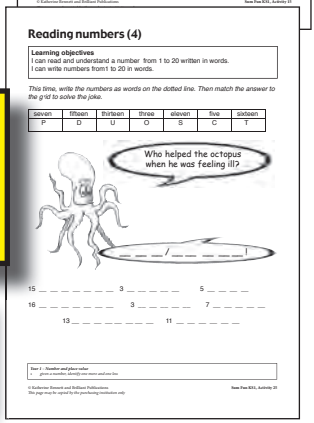
10, 12, 14,

60, 70, 80,

35, 40, 45,

52, 54, 56,

40, 50, 60,


Reading numbers (4)

Learning objectives
I can read and understand a number from 1 to 20 written in words.
I can write numbers from1 to 20 in words.

This time, write the numbers as words on the dotted line. Then match the answer to the grid to solve the joke.

seven	fifteen	thirteen	three	eleven	five	sixteen
P	D	U	O	S	C	T

Who helped the octopus when he was feeling ill?

___ ___ / ___ ___ ___ ___ ___

15 _ _ _ _ _ _ _ _ 3 _ _ _ _ _ _ 5 _ _ _ _

16 _ _ _ _ _ _ _ 3 _ _ _ _ _ _ 7 _ _ _ _ _

13 _ _ _ _ _ _ _ 11 _ _ _ _ _ _

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