



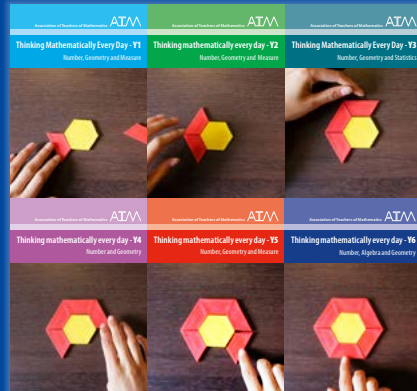
ATM

Association of Teachers of Mathematics

2020-2021 PRIMARY

www.atm.org.uk

Thinking Mathematically Every Day



New Series for Years 1-6

ATM RESOURCES – full of activities to promote discussion ideas, encourage a questioning approach and deepen understanding

Discount for members
25%

MATHEMATICS RESOURCES

INTRODUCTION

The Association of Teachers of Mathematics – ATM – welcomes anyone with an interest in mathematics education, from teachers of primary children to university lecturers and from freelance consultants to secondary school teaching assistants. As a member of ATM, you gain access to a wealth of support, information and ideas. There are many reasons to join ATM and here are just a few:

1. Publications: ATM is a highly regarded provider of exceptional publications which can support any teacher in the classroom. From *Exploring Mathematics with Younger Children* and *Thinking for Ourselves* to books suitable for KS2 classrooms that cross over to Secondary learning. There is something for everyone and you will find details on many of these in this Primary Catalogue. All of the publications are consistent with ATM's aims and guiding principles and members also receive a discount of 25% making them exceptional value.

2. Journal: As a member of ATM, you will receive five copies of the journal (*Mathematics Teaching*) each year. The journal has articles from colleagues who work across all phases and who do pretty much every job imaginable within mathematics education. Membership also provides access to an online back-catalogue of articles from every previous journal. This is an invaluable bank of interesting pedagogical ideas, stimulating activities, thought-provoking research and genuine good practice for the classroom.

3. Events: There are lots of opportunities to meet and network with other members of ATM. The Easter Conference is our main event and delegates always come away feeling challenged and inspired! There is also a varied local branch meeting programme. Information about branches can be found at www.atm.org.uk/branches.

4. Website: The site includes lots of free information and support for your classroom including reviews, news of events and open resources for the classroom. Lots of new Free Resources have been added during 2020 including the 'Maths Snacks' videos, CPD videos for teachers and teacher trainees, as other resources to download and use at home and in school.

5. ATM Guiding Principles: These describe a way of working, a way of teaching, a way of being ... which are central to all of the above. They are what make the ATM the ATM.

You can read about them on our website: www.atm.org.uk

To find out more about the benefits of joining the ATM, drop an email to:

membership@atm.org.uk or visit www.atm.org.uk

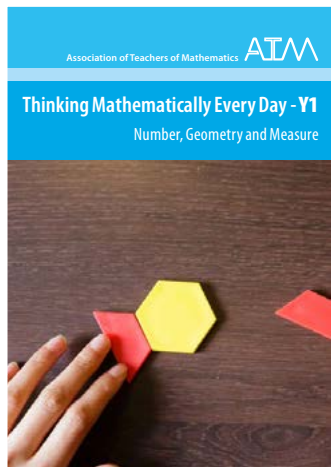
NEW

EYFS

KS1

KS2

Best Seller



BOOK £ 5.25 members

List £ 7.00

Go to www.atm.org.uk/shop/act022

**Inspiring teachers to embed
reasoning, problem solving and
conceptual fluency in their lessons**

DOWNLOAD £2.70 members

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Thinking mathematically every day - Y1

Number, Geometry and Measure

ATM/MA primary group
Viv Townsend - Collator
Heather Davis - Editor

This one is for children in Year 1, and three tasks have been chosen, on Number, Geometry and Measure, to show how they can work in a Year 1 classroom. They are linked to the programme of study for the year group.

Ideas and prompts are given for promoting conceptual understanding and these are separate from those for reasoning and those for problem solving.

You can decide whether you want to focus on developing understanding, reasoning or problem solving at that particular moment. However, whichever you choose it will also develop the other two – an active brain, making sense of mathematics, will naturally progress in all three aspects.

Thinking mathematically every day - Y2

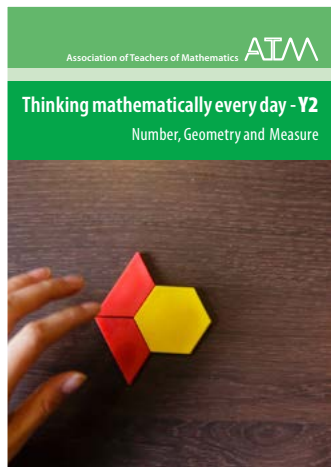
Number, Geometry and Measure

ATM/MA primary group
Viv Townsend - Collator
Heather Davis - Editor

This one is for children in Year 2, and three tasks have been chosen, involving Number, Geometry and Measure, to show how they can work in a Year 2 classroom. They are linked to the programme of study for the year group.

Ideas and prompts are given for promoting conceptual understanding and these are separate from those for reasoning and those for problem solving. You can decide whether you want to focus on developing understanding, reasoning or problem solving at that particular moment.

However, whichever you choose it will also develop the other two – an active brain, making sense of mathematics, will naturally progress in all four aspects.



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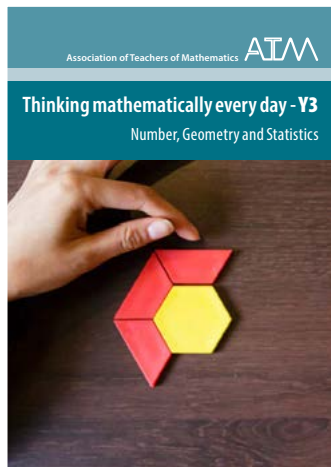
Go to www.atm.org.uk/shop/act/27

Inspiring teachers to embed reasoning, problem solving and conceptual fluency in their lessons

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Inspiring teachers to embed reasoning, problem solving and conceptual fluency in their lessons

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Thinking mathematically every day - Y3

Number, Geometry and Statistics

ATM/MA primary group
Viv Townsend - Collator
Heather Davis - Editor

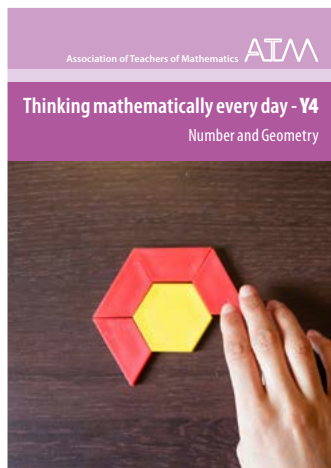
A5 colour book, aimed at children in Year 3.

The book includes tasks on Number, Geometry and Statistics that have been written to inspire teachers to embed reasoning, problem solving and conceptual fluency in to all their lessons.

These are mapped to the programme of study for the Y3 year group.

Ideas and prompts are given for promoting conceptual understanding as well as reasoning and problem solving.

Whether you choose to focus on developing understanding, reasoning or problem solving at that particular moment, development in all three areas of learning will inevitably occur.



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List £ 7.00

Go to www.atm.org.uk/shop/act/25

Inspiring teachers to embed reasoning, problem solving and conceptual fluency in their lessons

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Thinking mathematically every day - Y4 Number and Geometry

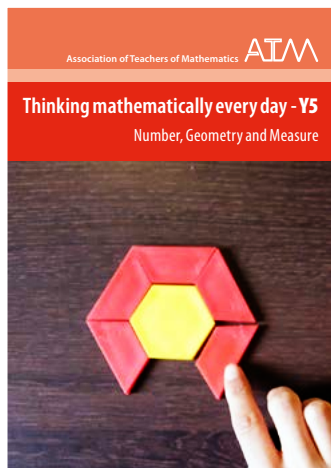
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Heather Davis - Editor

This one is for children in Year 4, and three tasks have been chosen, involving Number and Geometry, to show how they can work in a Year 4 classroom. They are linked to the programme of study for the year group.

Ideas and prompts are given for promoting conceptual understanding and these are separate from those for reasoning and those for problem solving.

You can decide whether you want to focus on developing understanding, reasoning or problem solving at that particular moment.

However, whichever you choose it will also develop the other two – an active brain, making sense of mathematics, will naturally progress in all three aspects.



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Go to www.atm.org.uk/shop/act124

**Inspiring teachers to embed
reasoning, problem solving and
conceptual fluency in their lessons**

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Thinking mathematically every day - Y5

Number, Geometry and Measure

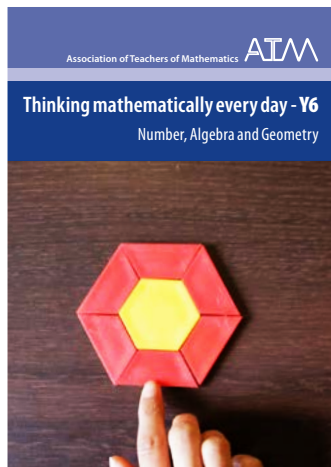
ATM/MA primary group
Viv Townsend - Collator
Heather Davis - Editor

This one is for children in Year 5, and three tasks have been chosen, involving Number, Geometry and Measure, to show how they can work in a Year 5 classroom. They are linked to the programme of study for the year group.

Ideas and prompts are given for promoting conceptual understanding and these are separate from those for reasoning and those for problem solving.

You can decide whether you want to focus on developing understanding, reasoning or problem solving at that particular moment.

However, whichever you choose it will also develop the other two – an active brain, making sense of mathematics, will naturally progress in all three aspects.



BOOK £ 5.25 members

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Inspiring teachers to embed reasoning, problem solving and conceptual fluency in their lessons

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Thinking mathematically every day - Y6

Number, Algebra and Geometry

ATM/MA primary group
Viv Townsend - Collator
Heather Davis - Editor

This one is for children in Year 6, and three tasks have been chosen, involving Number, Algebra and Geometry to show how they can work in a Year 6 classroom.

They are linked to the programme of study for the year group.

Ideas and prompts are given for promoting conceptual understanding and these are separate from those for reasoning and those for problem solving.

You can decide whether you want to focus on developing understanding, reasoning or problem solving at that particular moment.

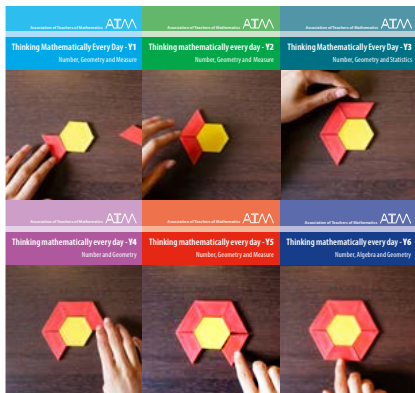
However, whichever you choose it will also develop the other two – an active brain, making sense of mathematics, will naturally progress in all four aspects.

Thinking Mathematically Every Day book Series - set of six books for Years 1 - 6

ATM/MA primary group
Viv Townsend - Collator
Heather Davis - Editor

The set of *Thinking Mathematically Every Day* for Years 1 - 6 is now available as a pack.

The series contains separate books for each of the years 1 to 6, written to inspire teachers to embed reasoning, problem solving and conceptual fluency in to all of their lessons. They are linked to the programme of study for the different year groups. Ideas and prompts are given for promoting conceptual understanding and these are separate from those for reasoning and those for problem solving. You can decide whether you want to focus on developing understanding, reasoning or problem solving at that particular moment. Whichever you choose it will also develop the other two – an active brain, making sense of mathematics will naturally progress in all three aspects.



PACK OF BOOKS £24.00 members

List £ 32.00

Go to www.atm.org.uk/shop/act128pk

A set of booklets, for each of years 1 to 6, to inspire teachers to embed reasoning, problem solving and conceptual fluency in all of their lessons.

DOWNLOAD £12.00 members

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Go to www.atm.org.uk/shop/DNL178

KS1

KS2



BOOK £9.00 members

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e-book £4.50 members

List £6.00

Go to www.atm.org.uk/shop/DNL067

“Very impressed with this little Gem!”
Greg Thomas

Exploring Mathematics with Younger Children

Edited By Christine Mitchell and Helen Williams.

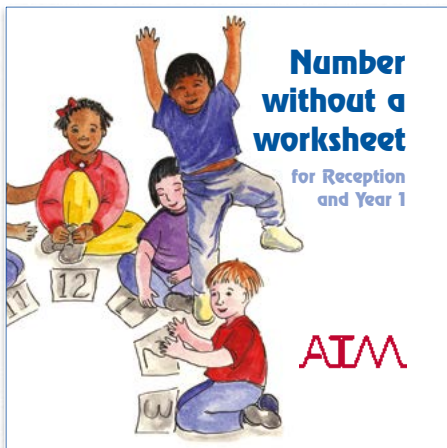
An updated, re-issue of a collection of starting points that focuses on classroom interactions in order to develop children's mathematical thinking and encourage teacher-creativity.

This inspiring publication offers the opportunity for EYFS/KS1 children to solve or invent problems; to share their reasoning and to rehearse their knowledge and understanding of mathematical ideas in small groups, pairs or trios.

It is full of challenging, yet practical maths tasks and engaging problems.

EYFS

KS1



Number Without a Worksheet

A collection of ideas of core number activities to encourage younger children to think mathematically. In this book you will find 12 core activities, each with idea includes suggestions for extensions, simplifications and suggestions for developing the ideas, together with a list of resources and the identification of the mathematical learning. The activities give the help you need to save planning time and to encourage children to think mathematically.

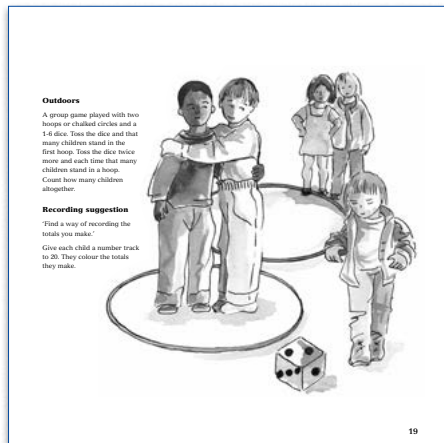
BOOK £9.00 members

List £12.00

Go to www.atm.org.uk/shop/ACT052

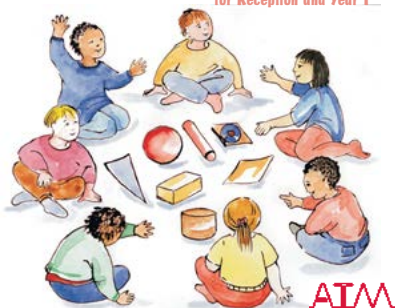
This book is the help you need to save planning time and to get the children thinking mathematically.

Written by the Early Childhood Mathematics Group as a companion booklet to the ATM activity book 'Exploring mathematics with younger children'.



Space and shape without a worksheet

for Reception and Year 1



BOOK £9.00 members

List £12.00

Go to www.atm.org.uk/shop/ACT063

The ideas were written and selected by the Members of the ATM Early Childhood Group.

The aim of the activities is to provide interesting and practical activities for children as they make the transition from Foundation Stage to Year 1. This can be a challenging time for both teachers and learners.

Shape and Space Without a Worksheet

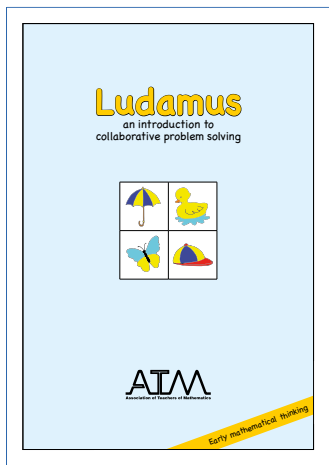
This book includes 12 core activities for children as they make the transition from foundation stage to year 1. Each activity has extension tasks, with opportunities to encourage children to think mathematically without resorting to worksheets, plus simplifications and suggestions for developing ideas, resource lists and identification of learning outcomes.



15

EYFS

KS1



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e-BOOK £6.00 members

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100 page PDF has introductory activities, picture cards, clue cards and grids.

Ludamus

Jill Mansergh

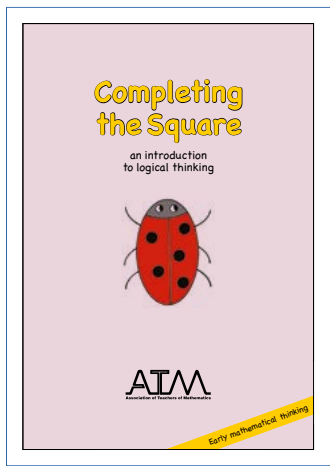
Ludamus Book and PDF introduces collaborative problem solving to young children through a series of games which become progressively more complex. They are required to arrange picture cards in a certain order using clues from the clue cards provided.

The games develop understanding of positional language as children discuss the clues, following instructions to place the pictures. Suggestions for activities are included to ensure that children have an understanding of the positional language that is needed.

Ludamus, from the Latin 'we play' or 'let's play' consist of sets of picture cards designed initially for adults to play with children and, when they are ready, for small groups of children to play together. The games can be used with children in Foundation and KS1 and may also be particularly useful for older children with English as an additional language.

EYFS

KS1



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Go to www.atm.org.uk/shop/DNL113

85 page PDF has introductory activities, picture cards, clue cards and grids.

Completing the Square

Jill Mansergh

85 downloadable pages of games, activities and cards to encourage children to sort and classify object, colours and numbers.

Completing the Square is a set of games played on a board which encourage children to sort and classify objects, colours and numbers. Through playing the games children will develop skills essential for mathematical development. Games provide an environment for children to discuss characteristics of objects. Children sort according to characteristics arranging cards in a grid format. Foundation, KS1

A booklet and accompanying 85 page PDF file contains different activities, cards, grids and templates. It is one of the titles from the early *Mathematical Thinking* Series and includes a wealth of collaborative problem solving activities and games for younger children. All the activities develop mathematical discussion, logical reasoning and systematic working.

EYFS

KS1

Mathematical Allsorts

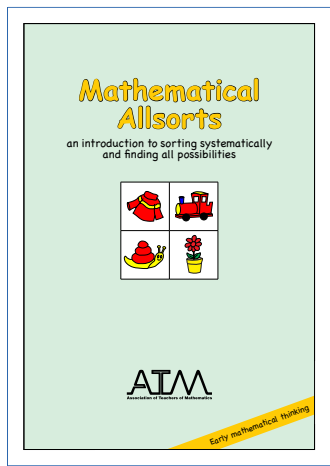
Jill Mansergh

Mathematical Allsorts is designed to introduce children to sorting systematically and finding all possibilities. It contains a booklet plus sets of cards that can be sorted in many different ways.

There are small, medium and large cards as well as templates for children to colour themselves. Games develop understanding of completing sets and generalising statements. Children discuss the similarities and differences.

A PDF containing 108 pages of different activities, cards, grids and templates.

Children are introduced to mathematical investigations from a young age. One type of investigation is finding all the possibilities and children are encouraged to be systematic in their approach to this.



e-BOOK £6.00 members

List £8.00

Go to www.atm.org.uk/shop/DNL115

108 page PDF has games, picture cards, templates and grids.

Little People – Big Maths

Jenny Shaw, Emma Howell, Alan Bloomfield

A collection of practical activities suitable for foundation and KS1 children working together which can be adapted for different age groups.

The activities are designed to be fun and enable children to develop their mathematical understanding in non-threatening situations.

“ The children always request to play the ‘picnic game’ and have become excellent at offering suggestions for rules half way through. Their vocabulary has improved ... I can model language structures. ”
TMT-CM



BOOK £10.50 members

List £14.00

Go to www.atm.org.uk/shop/act076

EYFS

KS1

Primary Questions and Prompts

**Margaret Jeffcoat, Margaret Jones, Jill Mansergh
John Mason, Heather Sewell, Anne Watson**

ATM's best-selling discussion book *Questions and Prompts for Mathematical Thinking* has been re-written for teachers working with KS1 and KS2 classes.

The original grid for analysing and identifying questions, which was devised by Anne Watson and John Mason has not been changed.

Primary Questions and Prompts is adapted to support primary practitioners in planning their teaching interactions, broadening their repertoire of questions and finding out more about how their pupils develop the ability to think mathematically.



Primary Questions & Prompts

ATM

BOOK £10.50 members

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Go to www.atm.org.uk/shop/dis003

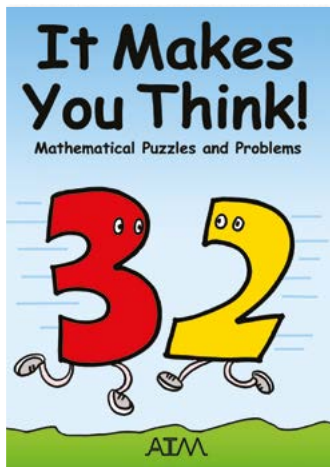
e-book £5.25 members

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KS1

KS2



BOOK & DOWNLOAD £16.50 members

List £22.00

Go to www.atm.org.uk/shop/act066pk

100+ pages of colour and b/w resources are available on the accompanying PDF document.

It Makes You Think

Mathematical Puzzles and Problems

Jill Mansergh

A selection of activities to encourage students to think, by themselves, with a partner, in a group or as a class.

This photocopiable book comes with a PDF of resources to use alongside the problems.

Topics covered include:

- Working with a variety of shape cards.
- Activities for questioning by the teacher in a mental oral starter or by children challenging each other with questions.
- Collaborative problem solving activities with accompanying resources to use alongside the problems.
- Ideas to encourage children to reason and to articulate their reasoning.

“Great content – use straight away (Ma I)”

KS1

KS2

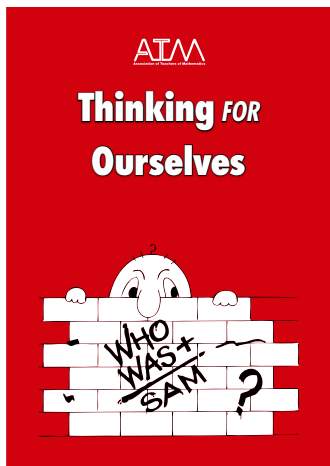
Thinking for Ourselves

Jill Mansergh and Margaret Jones

Aimed at primary and early years teachers.

This book is presented in three sections and provides a variety of contexts in which students are encouraged to think for themselves; whilst encouraging them to respond to a variety of situations, including:

- Mathematical statements
- Longer problem solving activities
- Pictorial resources
- Encourages children to respond with their own ideas, and questions and provide reasons for their responses
- Promotes reasoning and problem solving, within interesting contexts
- Suitable for pupils working from below level 1 to level 5 of the National Curriculum in England.



BOOK £10.50 members

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Go to www.atm.org.uk/shop/dis019

“Questions to promote mathematical thinking skills is a brilliant section full of ideas for getting children talking about mathematics.

Amazing value for money”

Viv Townsend

KS1

KS2



BOOK & DOWNLOAD £7.50 members

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e-book £3.75 members

List £5.00

Go to www.atm.org.uk/shop/DNL170

Tables Together

A complete programme for learning multiplication tables at KS2

Geoff Faux

Designed to build confidence in learning Multiplication Tables in a way that relies less on straight forward memorising while developing thinking skills in the learners.

Following the roll-out of multiplication tables tests for Y4 in September 2018, this book written by Geoff Faux, is designed to build confidence in learning Multiplication Tables in a way that relies less on straight forward memorising while developing thinking skills in the learners.

The A5 book is accompanied by a set of whiteboard slides for use in the classroom showing various tables grids. It is useful to know the multiplication table facts, or at least to know some and be able to work the rest out quickly and Geoff's narrative leads the reader (teacher) through the steps to take, with their class to enable this to happen.



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BOOK ONLY £5.25 members

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e-book £3.75 members

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Go to www.atm.org.uk/shop/DNL130

Pick and Mix — Mathematical Challenges for a KS2 classroom

Mike Ollerton

This is a collection of challenges that will engage learners at KS2 in mathematical reasoning and problem solving.

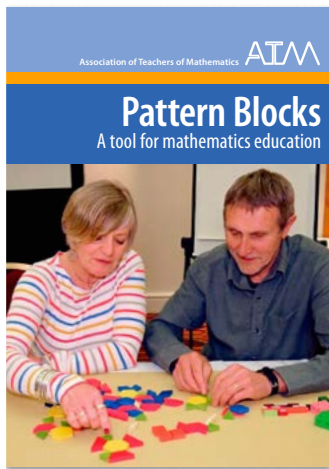
Organised by mathematical topic there are some golden oldies and fascinating new puzzles to excite your learners.

This book provides around 100 tasks that develop fluency with number, algebra and geometry together with the independent thinking required for problem solving.

A set of 79 whiteboard slides

accompanies the e-book and download

All the activities have been trialed in mixed year 3 - 6 classroom at a local Primary School.



BOOK & DOWNLOAD £10.50 members

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Go to www.atm.org.uk/shop/ACT123pk

e-book £6.00 members

List £8.00

Go to www.atm.org.uk/shop/DNL168

Pattern Blocks

A tool for mathematics education

Simon Gregg

This book provides a fascinating exploration into pattern blocks, drawing on a popular and effective tool for mathematics education devised in the 1960s and used extensively around the world. It will be a highly valuable resource for teachers delivering aspects of the EYFS, KS1, KS2 and KS3 curriculum in England, as well as a range of international primary curricula.

The activities in this book are designed for ease of use in the classroom, and are accompanied by templates that can be printed out for particular explorations with pattern blocks.

“Pattern Blocks ... are a fairly unique manipulative and as such, can be the start of some accessible and powerful mathematical reasoning. It should not be necessary to point out how important spatial reasoning is for later, broader mathematical achievement; the research is clear” *Helen Williams*

EYFS

KS1

KS2

KS3



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e-book £6.00 members

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Cuisenaire - from Early Years to Adult

Mike Ollerton, Helen Williams and Simon Gregg

With younger children or older learners the use of practical materials is fundamental to developing conceptual understanding.

The book illustrates how you can use Cuisenaire rods with your learners, whatever age they may be. The diagrams give the detail of how the mathematical concepts are represented while the photos give authenticity, showing them being used by learners.

A set of 35+ whiteboard slides

accompanies the book to help you transform your learners' understanding of the structure of number and calculation, and focus on what is being learnt.

Use the ideas to deepen the understanding of your learners so they can master the structure of the number system.

“A must buy for EVERY maths teacher!”

Drew Foster

KS1

KS2

KS3

KS4

KS5

Adult

Challenge Activities

Intriguing problems for pairs working together

Jenny Murray

Each downloadable pack contains between 10 & 12 photocopiable activities that promote problem solving skills for children working independently or in groups.

Sets contain copies of both black and white and colour cards for easy printing.

They have been designed for differing age groups, but they can also be used by both older and younger groups according to ability.



e-BOOK – EACH £3.60 members

List £4.80

Go to www.atm.org.uk/shop/dnl077pk

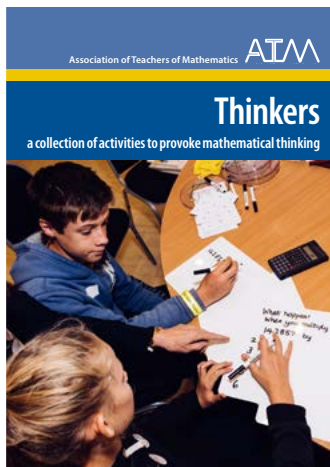
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KS2

**LOWER
KS3**



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e-book £5.25 members

List £7.00

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Thinkers

Chris Bills

Liz Bills

John Mason

Anne Watson

A fantastic collection of activities that can be integrated into any lesson to provoke and deepen mathematical thinking.

This book includes sixteen different contexts for exemplifying and generalising the processes at the heart of doing mathematics.

There are examples of how teachers can use the techniques for any topic in mathematics.

This **ATM BEST SELLER** promotes a classroom culture in which learner-generated examples open a window on mathematics that textbook exercises leave closed.

“One of my absolute favourites”

Mr Matlock

KS2

KS3

KS4

KS5

Enjoying Mathematics with Origami

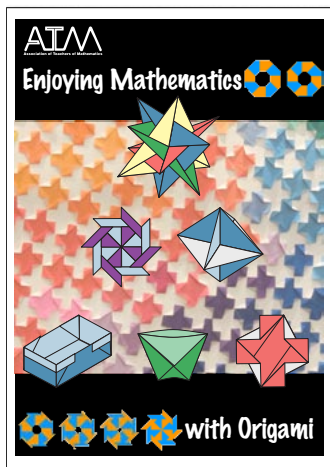
Tung Ken Lam

Download and get-going with some wonderful Origami starter ideas.

Activities include:

- Making a Paper Cup
- Magazine Box
- Magic Star
- Greek Cross Tessellation
- Skeletal Octahedron
- and WXYZ, a further activity experimenting with skeletal cuboctahedra.

Topics include: Properties of 2D and 3D shapes; Angles and angle relationships; Tessellations and tiling patterns



e-book FREE members

List £2.00

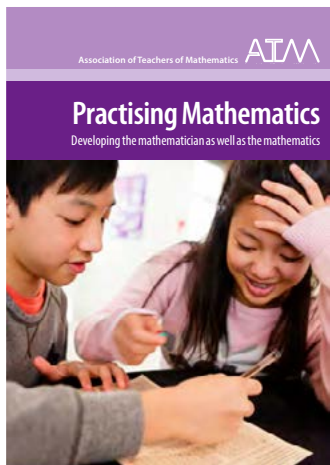
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KS2

KS3

KS4

KS5



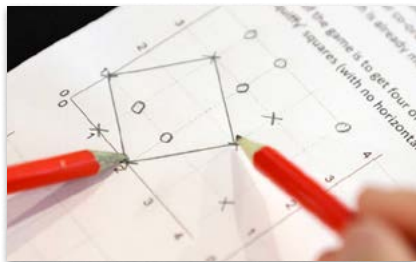
Practising Mathematics

**Developing the mathematician
as well as the mathematics**

Dave Hewitt and Tom Francome

This book offers a wide selection of ideas for practising the content of the upper primary and secondary mathematics curriculum, whilst developing the reasoning and problem solving skills so vital for success in school and beyond.

It is a fascinating collection of tasks by Dave Hewitt and Tom Francome which contains activities from many areas of the mathematics curriculum including Number work, Ratio and Proportion, Algebra, Geometry, Probability and Statistics.



BOOK & DOWNLOAD £15.00 members

List £20.00

Go to www.atm.org.uk/shop/ACT107pk

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Go to www.atm.org.uk/shop/DNL158

KS2

KS3

KS4

Learning Mathematics with Origami

Tung Ken Lam and Sue Pope

This book draws on the authors' substantial experience of using origami in UK classrooms and is designed to support you using origami when teaching mathematics.

The book offers practical advice on how to use origami with learners while offering opportunities to think creatively, justify decisions and opinions and deepen understanding. The book includes starting points for many different topics, allowing learners to take responsibility for their own learning, explore areas of interest creatively and work collaboratively with others.

Topics include: Simple fractions; Properties of 2D and 3D shapes; Angles and angle relationships; Tessellations and tiling patterns

PDF version includes slides for classroom use.



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Go to www.atm.org.uk/shop/ACT101pk

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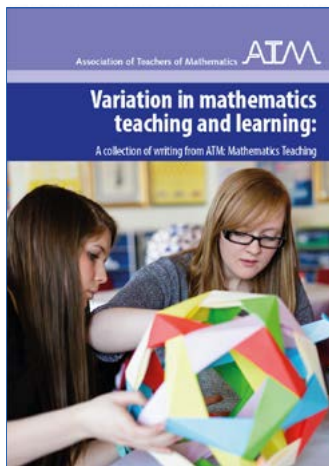
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Go to www.atm.org.uk/shop/ACT123

KS2

KS3

KS4



BOOK £10.50 members

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Go to www.atm.org.uk/shop/REA027

e-book £4.50 members

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Go to www.atm.org.uk/shop/DNL164

Variation in mathematics: A collection of writings from ATM Mathematics Teaching

Edited by Anne Watson

The word 'variation' has become a new buzzword for mathematics teachers, but it is not a new idea. Variation is embedded in mathematics. It is an old idea that pops up again and again when people think deeply about the teaching and learning of mathematics. This book is for anyone involved in teaching mathematics, at whatever level, and grounds current ideas in the wisdom and experience of four decades of ATM.

It is a collection of writing originally published in *Mathematics Teaching* (the journal of the ATM), organised into five sections, each focusing on how teaching shapes experience:

- Points of view
- Experiencing structure
- Reasoning from examples
- Teaching that depends on variation
- Freedom to create

KS1

KS2

KS3

KS4



BOOK £6.00 members

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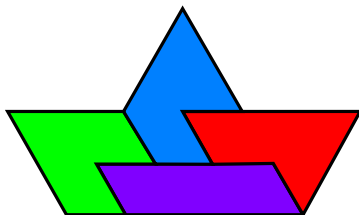
Go to www.atm.org.uk/shop/DNL162

Fun Maths

Games and Puzzles book with PDF support material

Bob Vertes

A collection of games, puzzles and explorations, to encourage doing maths for fun.



The activities are mostly designed to be done in pairs, threes, or larger groups.

The book includes a link to a PDF of additional resources to use with the ideas in this book.

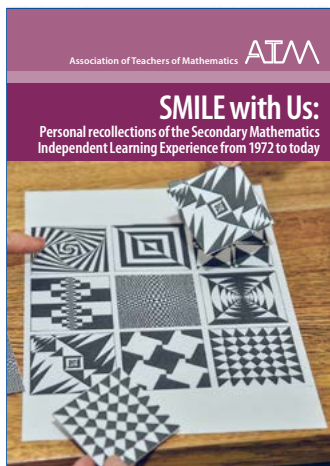
Suitable for KS2 KS3 and KS4 learners.

It is also ideal for parents and carers to use at home with children.

KS2

KS3

KS4



BOOK £12.00 members

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Go to www.atm.org.uk/shop/ACT120

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Go to www.atm.org.uk/shop/DNL154

SMILE with Us **Personal recollections of the Secondary Mathematics Independent Learning Experience from 1972 to today**

Ray Gibbons

Edited by Hilary Povey, Alison Clark-Wilson and John Hibbs.

The SMILE project fostered independence and creativity in both teachers and pupils and tackled head-on issues of inequity and prejudice ...

The result was a set of classroom resources still regarded as amongst the best to be found.

This book is the story of the SMILE project, told by Ray Gibbons and others – a story of teacher and pupil empowerment – supported and encouraged by a trusting local education authority.

As teachers grapple with current maths policy and its emphasis on ability thinking and teacher-led whole-class work, this book offers another view of how to provide rich mathematical experiences for all learners of all dispositions.

The book includes references to many of the SMILE materials which are still relevant in today's busy classroom and are freely available on STEM Learning archive.

KS2

KS3

Association of Teachers of Mathematics



Assessment in the new National Curriculum – an ATM perspective



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e-book £6.00 members

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Assessment in the New National Curriculum - an ATM Perspective

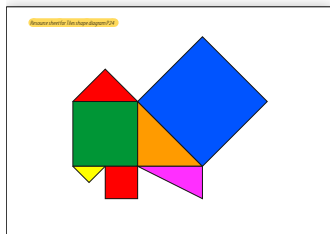
Barbara Ball, Anne Crosby, Jocelyn D'Arcy, Heather Davis, Jackie Fairchild, Anne Haworth, Mike Ollerton, Sue Pope and Katherine Pyke

This collection of tasks illustrates how a teacher can use ordinary classroom practice as the basis for assessment.

It will support the busy teacher wanting to assess reasoning and problem solving as well as content in the mathematics curriculum.

The approach taken may be applied to any task, so this resource will be valuable for groups of teachers who wish to develop rigorous assessment practice that supports progress and recognises achievement.

54 page book and colour PDF download plus additional slides for classroom use.



KS1

KS2

KS3

We Can Work It Out!

Collaborative Problem Solving for the Mathematics Classroom

Anitra Vickery and Mike Spooner

Collaborative Problem Solving for the Mathematics Classroom – a photocopiable book containing 25 sets of group problem-solving cards, each containing clues needed to solve a problem as well as some red herrings.

The activities draw on a range of different areas of mathematics including number, shape, time, data handling and money as well as focussing on more general thinking skills such as logical deduction and the organisation of information.

The problems use vocabulary that meets the requirements of the National Curriculum and the National Numeracy Strategy.



BOOK £16.50 members

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e-book £8.25 members

List £11.00

Go to www.atm.org.uk/shop/DNL073

KS2

KS3

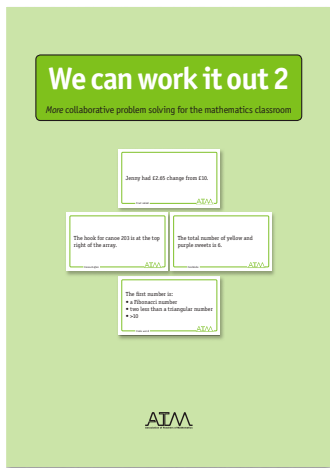
We Can Work It Out 2

Anitra Vickery and Mike Spooner

More collaborative Problem Solving for the Mathematics Classroom - following the popularity of Book 1, some more problem solving activities to challenge and develop reasoning in your classroom.

This collection contains twenty problem solving activities. Each activity is presented so that it can be cut up to make a collection of cards. Each set of cards poses problems and contains all the information needed to provide answers. The sets also contain information that is correct but of no relevance or use in solving the problem.

The activities draw on a range of different areas of mathematics including number, shape, time, handling data and money as well as focusing on more general thinking skills like logical deduction and the organisation of information.



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KS2

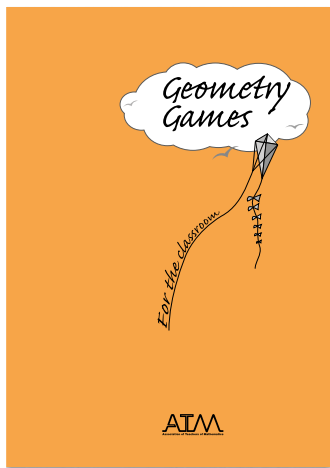
KS3

Geometry Games

Gillian Hatch

A collection of Geometry Games that can be played with the whole class or in small groups, keeping pupils engaged while working mentally in an interesting and challenging way.

Topics include angles, triangles, quadrilaterals and polygons.



BOOK £16.50 members

List £22.00

Go to www.atm.org.uk/shop/ACT061

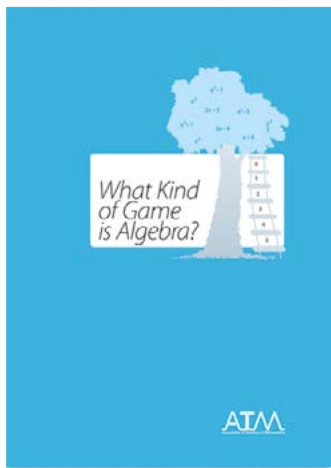
e-book £8.25 members

List £11.00

Go to www.atm.org.uk/shop/DNL027

KS2

KS3



What kind of game is Algebra?

Gillian Hatch

A collection of more than 50 photocopiable algebra games that are suitable for whole class and collaborative group work.

By playing games pupils can be introduced to new and sometimes quite hard concepts, in ways that are fun and thought provoking. These games **encourage pupils** to work collaboratively as they seek solutions and **they will very often work above their normal level** because of the relaxed atmosphere in which games are played.

The structure of some games will be familiar but they have been given a new twist so that they engage the players with working mentally in an **interesting and challenging** way.

Preparation in setting up games in the classroom may be time consuming but with these games **much of the preparation is already done**.

BOOK £16.50 members

List £22.00

Go to www.atm.org.uk/shop/ACT055

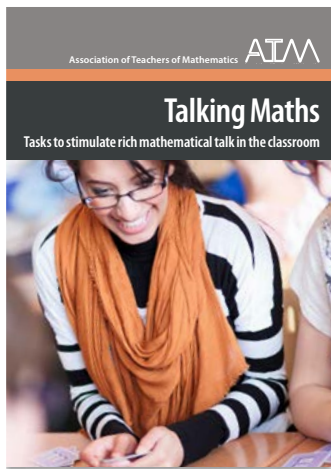
e-book £8.25 members

List £11.00

Go to www.atm.org.uk/shop/DNL075

KS2

KS3



Talking Maths

Tasks to stimulate rich mathematical talk in the classroom

Richard Perring

This book is designed to promote discussion while learners test, clarify and develop their understanding of mathematics. Each activity contains three types of task:

Always, Sometimes, Never
Multiple representations
Mysteries

There are examples for nine key areas of mathematics that could provide 27 lessons' worth of tasks while promoting discussion, understanding, confidence and independence in learners. The book is accompanied by a PDF containing the full sized activity cards to print and use.

“Having read through the tasks and tried some of them I can wholeheartedly say that were I a Head of Mathematics, again I would intersperse every activity into my departmental scheme of work.”

Mike Ollerton

BOOK & DOWNLOAD £13.50 members

List £18.00

Go to www.atm.org.uk/shop/ACT097pk

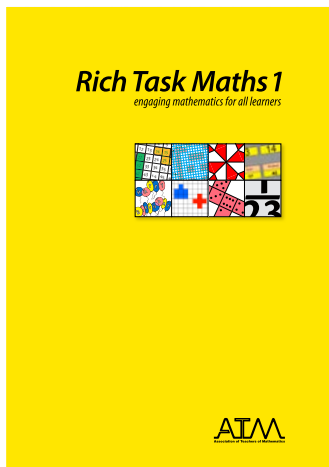
e-book £6.00 members

List £8.00

Go to www.atm.org.uk/shop/DNL112

KS2

KS3



Rich Task Maths 1

Engaging mathematics for all learners

Barbara Ball and Derek Ball

Book contain a collection of mathematical tasks based on the successful *Task Maths* series that help the learner to develop and extend knowledge and understanding while working on accessible and engaging tasks.

The tasks include activities on reasoning and problem solving while going deeper and challenging the learners, as well as offering hints about how to tackle the them.

The book includes an accompanying PDF containing an interactive colour version of the book for use in the classroom as well as spreadsheet files for some of the tasks.

EACH £16.50 members

List £22.00

Go to www.atm.org.uk/shop/ACT078pk

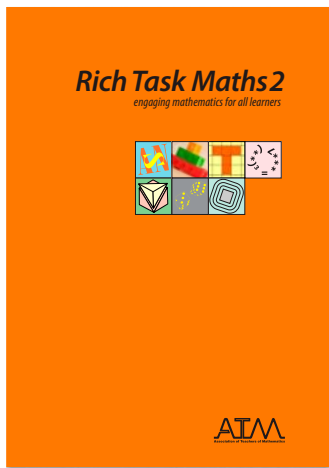
e-book £4.50 members

List £6.00

Go to www.atm.org.uk/shop/DNL134

KS2

KS3



Rich Task Maths 2

Engaging mathematics for all learners

Barbara Ball and Derek Ball

Book contain a collection of mathematical tasks based on the successful *Task Maths* series that help the learner to develop and extend knowledge and understanding while working on accessible and engaging tasks.

The tasks include activities on reasoning and problem solving while going deeper and challenging the learners, as well as offering hints about how to tackle the them.

The book includes an accompanying PDF containing an interactive colour version of the book for use in the classroom as well as spreadsheet files for some of the tasks.

EACH £16.50 members

List £22.00

Go to www.atm.org.uk/shop/ACT079pk

e-book £4.50 members

List £6.00

Go to www.atm.org.uk/shop/DNL156

KS2

KS3

Exploring Area and Fractions with Square Geoboards

Geoff Faux

This book contains tasks that develop a deep conceptual understanding of area and fractions.

They naturally stray into geometry demonstrating the rich inter-connectedness of mathematics, while developing their understanding, reasoning and problem solving skills.

This 76 page book is accompanied by a **PDF containing whiteboard slides** with questions to explore in the classroom, **plus 4 mini whiteboards printed with a 3 x 3 geoboard**. The white boards are printed with a 3 x 3 square geoboard and can be written on and rubbed off enabling the class to experiment and try out activities on the geoboard.

ATM



**Exploring
Area and
Fractions
with Square
Geoboards**

EACH £16.50 members

List £22.00

Go to www.atm.org.uk/shop/ACT095pk

e-book £8.25 members

List £11.00

Go to www.atm.org.uk/shop/DNL107

10 3x3 Whiteboards £9.00 members

List £12.00

Go to www.atm.org.uk/shop/GEN033pk

KS2

KS3

KS4

Exploring Geometry with a 9-Pin Circular Geoboard

Geoff Faux

Introduce your students to geometric reasoning, with ideas to encourage problem solving, including proof, justifying and reasoning.

The book is accompanied by a **PDF containing 100+ whiteboard slides** with images and questions for use in the classroom.

Includes a clear 9-pin Geoboard.

(Board diameter is 18 cm.)

Working with boards opens up possibilities for learners to engage naturally with mathematical processes; conjecturing, test conjectures, setting up chains or logical reasoning and communicating their results in picture form.

ATM



**Exploring
Geometry
with a
9-Pin
Circular
Geoboard**

PACK £16.50 members

List £22.00

Go to www.atm.org.uk/shop/ACT094pk

e-book £8.25 members

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5 Pack of Geoboards £16.50 members

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KS2

KS3

KS4



Best Seller

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Go to www.atm.org.uk/shop/ACT010

e-book £3.00 members

List £4.00

Go to www.atm.org.uk/shop/DNL011

Eight Days A Week

Edited by **Chris Bills**

A collection of puzzles and problems that are a rich source of ideas for KS2 and KS3 classrooms.

Contains eight questions for each week of the year – enough for one-a-day plus a bonus.

The questions are interesting and make you think about numbers differently than you may have done before whilst appealing to all ages, with or without a mathematical background.

“Anyone teaching mathematics should not be without a copy.”

Diana Cobden

KS2

KS3

KS4

KS5

Learning and Teaching Mathematics Without a Textbook

Mike Ollerton

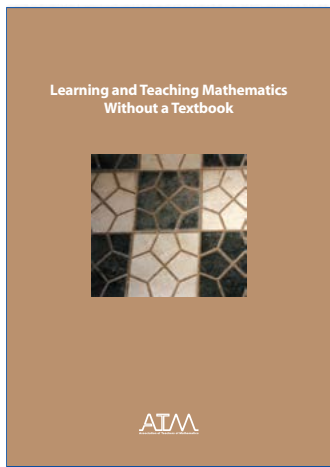
A collection of investigative and problem solving starting points and extension ideas, all of which have been used in many different classrooms.

This book is about learning mathematics using investigative approaches without needing to use a textbook as the main resource.

More specifically it offers alternative ways, for students to work on mathematics, to the commonly used method of carrying out exercises from a textbook. It is a collection of starting points and extension ideas, all of which have been used in many different classrooms.

It includes a wide collection of starting points and extension tasks to support teachers and help students to engage with the intrigue, surprise and fascination of mathematics.

The approach is investigative, tapping into a basic human condition of inquisitiveness.



BOOK £10.50 members

List £14.00

Go to www.atm.org.uk/shop/ACT017

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KS2

KS3

Everyone is Special (Learning and Teaching Mathematics 2)

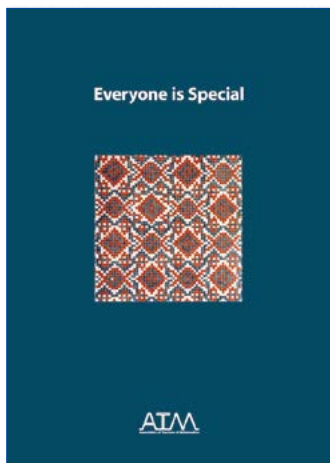
Mike Ollerton

For mathematics teachers across the entire attainment range.

Contains ideas, problem solving activities and starting points that can be used in schemes of work across the 7-16 age range.

“... has allowed me to consider more carefully where an activity might be used in my classroom and what the outcomes might be.”

Yvonne Scott



BOOK £10.50 members

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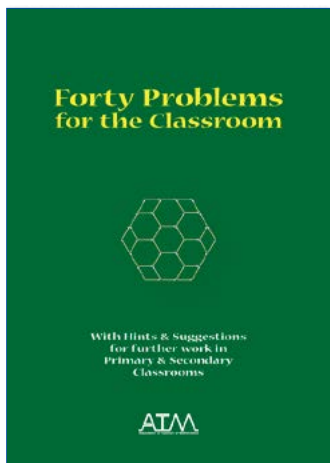
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KS2

KS3



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Go to www.atm.org.uk/shop/DNL025

Forty Problems for the Classroom

Derek Ball

A book of activities for the classroom to help learners of all ages to develop strategies for solving mathematical problems. It also contains hints, prompts and suggestions for further activities.

The publication has been designed so that you can photocopy activities to give out to your class.

“If you like using a problem solving approach to mathematics then these problems will suit your classroom and teaching style well..”

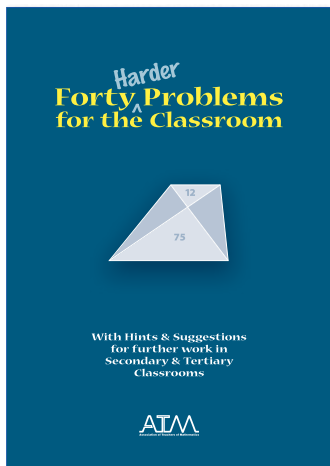
Yvonne Scott

KS2

KS3

KS4

KS5



BOOK £10.50 members

List £14.00

Go to www.atm.org.uk/shop/ACT060

e-book £5.25 members

List £7.00

Go to www.atm.org.uk/shop/DNL026

Forty Harder Problems for the Classroom

Derek Ball

This collection of challenging, non routine mathematical problems, offer opportunities for reasoning and problem solving in the classroom.

Aimed at KS3 and above, they help learners to use and apply their mathematical knowledge and skills.

All the problems are mathematically interesting and require a bit of flair to solve them.

Hints and suggestions for further work are included.

“I can think of lots of pupils I've taught who would have enjoyed the challenge of these problems.”

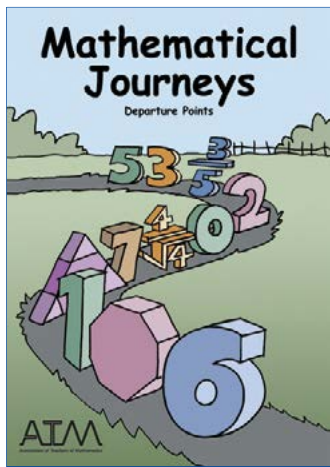
Ros Hyde

KS2

KS3

KS4

KS5



Mathematical Journeys Departure Points

ATM Working Group

A compilation of the best of the enormously successful *Points of Departure* series.

It contains starting points for mathematical exploration suitable for a wide range of ages and attainment which can be adapted to any scheme of work.

An excellent resource for problem solving, reasoning and open-ended investigations.

BOOK £6.00 members

List £8.00

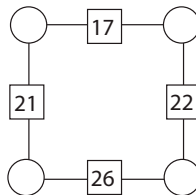
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Try these:



Why not try pentagons? Or hexagons?

Example illustration from P16

KS2

KS3

KS4

Mathematics for Every Occasion

Colin Foster

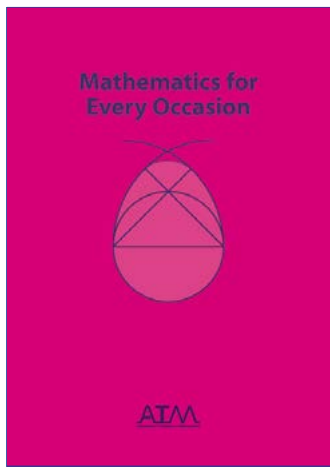
This book gives suggestions for interesting, rich mathematical activities on topical themes occurring throughout the year.

Catering for twenty-one different occasions it includes several possible tasks that could be used in each case.

The ideas require minimal preparation and all lead to interesting mathematical possibilities.

Most will work equally well with learners of any age or stage and are intended to provide opportunities to work in less structured ways, with learners taking as much control as possible for the direction of their mathematics.

It is not necessary for the teacher to be too directive or to know the precise route the activity might take and all possible outcomes beforehand.



BOOK £10.50 members

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Go to www.atm.org.uk/shop/ACT075

e-book £5.25 members

List £7.00

Go to www.atm.org.uk/shop/DNL105

KS2

KS3

KS4

Variety in Mathematics Lessons

Colin Foster

This book is a guide for teachers who wish to offer a greater diversity of experiences to learners in their school mathematics lessons.

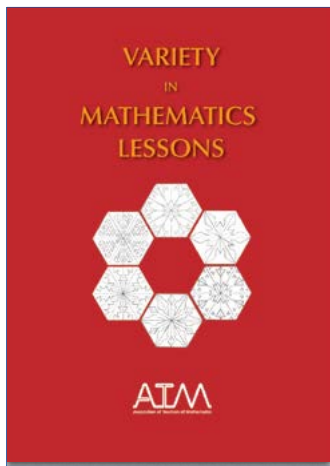
Fourteen different models of mathematics lesson are described, alongside concrete examples of how they can be implemented within core curriculum topics.

Prompts and questions are provided, together with suggestions of further avenues that learners might explore.

Many areas of the 11-16 mathematics curriculum are included and any mathematics teacher will find a wealth of stimulating ideas to use with their learners.

“I absolutely love this book. This is because every idea within can be adopted and adapted for use in, and to enhance any scheme of work.”

Mike Ollerton



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e-book £5.25 members

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KS2

KS3

KS4



e-book – FREE to ATM members

List £5.00

Go to www.atm.org.uk/shop/DNL099

Practical Geometry

Designed for younger children to develop early concepts of geometrical reasoning

Joe Murray

A downloadable pack of activities designed for younger children to develop early concepts of geometrical reasoning.

The pack includes work on area and perimeter, pentomino challenges, symmetry and tessellation and has cards that can be cut out. There are also teachers notes to help with planning.

The activities can be used with whole class or small groups. They have been developed to encourage children to investigate and sort shapes, promoting geometrical thinking and discussion in areas including congruence, symmetry and rotation.

KS1

KS2



Mathematical Activity Tiles

Devised by Adrian Pinel

Extensively used from infant to post 16 for investigating shape and space, tessellations, reflection, rotation, angle and tiling patterns. They can also be assembled into Polyhedra using tape or Copydex glue and may be re-used.

MATs Starter Pack



(1000 pcs) Contains: 200 each: equilateral triangles, squares & pentagons. 100 hexagons, octagons, isosceles triangles and rectangles.

Starter Pack £63.00 members

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Contains: 300 each equilateral triangles and squares; 200 pentagons, hexagons, octagons, isosceles triangles and rectangles; 100 each decagons and dodecagons.

GIANT PACK £133.50 members

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KS1

KS2

KS3

KS4