



WRITTEN BY MATHS EXPERT PETER CLARKE AND HIS TEAM

DEVELOPED FOR THE 2014 CURRICULUM

Busy Ant CONFIDENCE FROM THE START

SUPPORTS A

'MASTERY' APPROACH

TO THE TEACHING OF

MATHEMATICS

# WHAT IS BUSY ANT MATHS?

We know how challenging implementing a new curriculum can be, but with Busy Ant Maths you can rest assured that our expert ants have it covered!

# Busy Ant Maths and a 'mastery' approach to the teaching of mathematics

 $\checkmark$  The National Centre for Excellence in Teaching Mathematics (NCETM) has identified certain principles and features that characterise the 'mastery'

approach to the teaching of mathematics. These characteristics are embedded throughout the entire Busy Ant Maths scheme - from Foundation

 $\checkmark$  Busy Ant Maths is written with the primary intention of helping teachers

to help pupils develop 'mastery of mathematics', and raise levels of

 $\checkmark$  Every component of Busy Ant Maths emphasises, and provides guidance

on, the importance of the cyclical nature of teaching - planning, teaching and assessment - in order to best promote 'teaching for mastery'.

# Busy Ant Maths...

• Provides a cohesive programme of study that ensures progression and mastery while supporting you in delivering

- Has assessment at the heart and start with integrated and effective diagnostic, formative and summative assessment
- which helps to inform your planning and teaching • Gives you full digital support in measuring attainment and progress with the online Record-Keeping Tool on Collins Connect - an adaptable tracking and
- Engages pupils and helps you to deliver inspiring lessons with slideshows, games and interactive tools and activities on Collins Connect and with the Planning Tool it is easy to tailor the content to suit the needs of your class
- Offers you adaptability the Busy Ant Maths programme
- can be tailored to suit the needs of your class • Has been written specifically for the 2014 curriculum by leading maths expert Peter Clarke and his team of experienced authors - rigorously tested and developed

You can read more detail on how Busy Ant Maths can help you deliver a mastery curriculum here: collins.co.uk/BusyAntMaths





"After doing my research, I found out that Collins were preparing to launch their new maths scheme. Having previously been impressed and amazed by the quality of the schemes, I had high hopes! The lessons have opportunities to be differentiated in 5 ways and the units are flexible and give teachers the opportunities to be creative. I am extremely impressed with the online planning tool and am really looking forward to implementing this scheme of work across years 3 and 4 and then into years 1 and 5 next year."

Charlotte Angeli, Senior Leader, Chigwell Primary

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"Busy Ant Maths gives you very clear objectives and success criteria but the way that you deliver it using your kinaesthetic activity or perhaps a visual on the board can really be adapted for the children within your class."

For the full video interview with Laura Reynolds, Year 3 Co-ordinator at South Farnham School, visit our website: www.collins.co.uk/busyantmaths



"Assessment is at the heart of this resource and Busy Ant Maths, in my opinion, has created an approach which is manageable and meaningful..." Hazel Pritchard, Teach Primary

# WRITTEN BY TEACHERS FOR TEACHERS

With over 50 years' teaching experience across the world, our expert team of authors really know what works and what doesn't when teaching maths.

### MEET PETER AND HIS COLONY OF EXPERTS ...



### PETER CLARKE, SERIES EDITOR

Peter is a highly respected mathematics consultant and lecturer working throughout the UK and abroad. A former Maths Subject Leader, Deputy Headteacher and LEA Advisor, he has extensive experience in teaching and writing for primary mathematics education.

### JEANETTE MUMFORD

Jeanette is a highly experienced teacher and lecturer of primary maths. She taught in Glasgow primary schools for over 15 years before becoming a lecturer at St Andrew's College for PGCE students specialising in Maths. Jeanette was also part of the team that brought you Collins New Primary Maths.

### SANDRA ROBERTS

Sandra has been teaching in inner London schools for over 25 years and within that time has taught every year group in the primary phase. On top of that Sandra has worked for G years as a Primary Maths Consultant in the London borough of Tower Hamlets.

Jo has over 12 years' teaching experience across the whole primary phase, specialising in Key Stage 1 and Early Years. She is an experienced trainer and has co-ordinated and run many INSET training days as well as being part of the team that brought you Collins New Primary Maths.

### ELIZABETH JURGENSEN

Elizabeth is currently teaching mathematics in China. She has worked predominantly in primary schools in the UK but has taught for a number of years internationally in Australia, South East Asia and the United States. Her experience covers all year groups from Year 1 to Year 6. She has been a class teacher, a Maths Co-ordinator, a Deputy Head and Maths Advisor in a London borough and the Director of Learning in the US.

### CONTRIBUTING ANTS:

Caroline Fawcus, Nicola Morgan, Cherri Moseley, Linda Glithro, Caroline Clissold, Louise Carr, Rachel Axten-Higgs and Janet Rees



# STRUCTURED?

to find out more go to



## NEW FOR 2016

# BUSY ANT MATHS STRETCH AND CHALLENGE

Challenge your more able pupils with resources for each year designed to broaden and deepen their mathematical understanding.

Busy Ant Maths Stretch and Challenge resources will support you in delivering structured guidance and support for gifted children who are exceeding age-related expectations in mathematics. This problem-solving, cross-curricular programme for children working above end-of-year expectations is ideal if you are looking for a ready-made solution to deliver to the high achievers in your cohort.

Self-contained activity booklets (issues) promote interdependent thinking and develop children's problem-solving skills. Accompanying teacher's notes for each issue provide guidance, support and next steps.

#### the same mathematical topic stretch and Challenge activities Let's Investigate M Construct Look at this natter Look at the different shapes you made in the 😪 Let's nvestigate activity opposite in you use these different hapes so that every triangle n this pattern of triangle These puzzles are from Ancient Greece. Cut out the 1st cross on the sheet and cut it up along the lines. Each of these two shapes Put the 4 pieces has been made by colouring together to make a square 5 triangles. Cut out the 2nd cross and cut it up along the Use the second grid on the sheet to show your pattern. Using the first grid on the sheet, what other .00 shapes can you make

by colouring 5 triangles?

### EACH STRETCH AND CHALLENGE RESOURCE WILL CONTAIN:

- An introduction and matching charts
- 36 sets of pupil activities one per week, consisting of between 5 and 8 different activities, all related to
- 36 sets of teaching notes, to correspond to the
- Resource sheets, records of completion, selfassessment and notes - all photocopiable



## NEW FOR 2016

# BUSY ANT MATHS TEST PACKS BOOST THE PERFORMANCE OF YOUR PUPILS IN THE NEW SATS!

These photocopiable packs, one for each year, each contain a practice test that will support you in making a decision as to whether or not an individual child has achieved mastery of the programme of study for each year group.

In June 2016, children will sit the new KS1 and KS2 Maths SATs for the first time. Busy Ant Maths Test Packs provide tests that you can easily deliver and mark, using the provided completed test. The test results will support you in being confident that your pupils are on track to meet age-related expectations, as they move between years and key stages.

You can use the tests alongside Busy Ant Maths Assessment Guides, or by themselves.

### For KS1, there will be 2 papers for each year:

- Paper 1 Arithmetic
- Paper 2 Mathematical reasoning

### At KS2, there will be 3 papers per year:

- Paper 1 Arithmetic
- Paper 2 Mathematical reasoning
- Paper 3 Mathematical reasoning

Each test is also provided complete with the correct answers in place, to assist in marking plus a full marking scheme and rationale, with any additional information required. You will also be able to record and report results using a raw score and a scaled score, based on the new performance descriptors.



# ASSESSMENT GUIDES

Buys Ant Maths provides comprehensive assessment support. Whether you are looking at an individual child's progress, at a class, or at a whole year group, Busy Ant Maths offers a simple and robust way of assessing, recording, tracking and sharing children's progress.

The Busy Ant Maths Assessment Guides consist of seven key components:

- Assessment Tasks
- Assessment Exercises
- End-of-unit Tests
- Pupil Self-assessments
- Record keeping formats
- Resources to accompany the Assessment Tasks
- Tracking grids which track back and forward through the Mathematics National Curriculum attainment targets

The content of the Assessment Guides is available in Word and PDF format on Collins Connect. Also available online is our Record-Keeping Tool which can be used to record judgements as well as track progress and attainment throughout the year. Assessment data can be stored online and presented digitally for class and whole-school analysis. The Assessment Guide can be used as a self-standing assessment resource and tracking system where schools already have a scheme of work in place.



# BUSY ANT MATHS FOUNDATION STAGE

The Busy Ant Maths Foundation Stage has been designed to ensure mathematical confidence from the start. The new resources fully support the statutory standards of the Early Years Foundation Stage (EYFS) and extend the scope of the Busy Ant Maths scheme into the Reception year - providing full continuity for your school.



Collins

The **Teach** section on Collins Connect contains all of the teaching content organised into units. Each unit section contains

- Word and PDF versions of the unit introductions, teacher-led activities and explore and play activities
- The teaching assets for the unit, including tools, slideshows and interactive activities

The digital **Record-Keeping** tool on Collins Connect supports the Foundation Stage.

In the **Support** section, you will find the calculations policy and the Medium Term Plan

### The Games, Tools and Songs section contains:

- Sing-along animated songs for children to learn and ioin in with
- Teacher-led interactive tools, which can be used for front of class teaching
- 8 games with 3 levels, which can be played on an iPad, computer or whiteboard

# THE BUSY ANT MATHS TEACHER'S GUIDES

The Teacher's Guides provide you with progressive, step-by-step programmes designed to ensure key concepts are reviewed and practised regularly. Each term is organised into four 3-week units. Each unit has 4 lessons per week plus a 5th session to be used for consolidation and extension activities, on whichever day of the week your class needs them.

To support your weekly planning, Collins Connect displays all the content for that week's teaching on one page. The weekly planning grid gives you an overview of the week's work; the Getting Started section suggests warm up activities and the main section contains lesson plans, slideshows, links to tools, and all of the relevant resources for that week's teaching.

Each lesson plan is provided in both PDF and Word form, giving you the freedom to edit where necessary and arrange as you wish.





DID YOU KNOW... ANTS MAY BE THE ONLY GROUP APART FROM MAMMALS WHERE INTERACTIVE TEACHING HAS BEEN OBSERVED.

#### Year 3, Unit I, Week I, Lesson 4





Formative assessment opportunities are built-in throughout each lesson in the Busy Ant Maths Teacher's Guides.

Pre-requisites for learning are highlighted and links to the relevant assessment content and materials are included.

Quickly check that children have the knowledge they need for the lesson with prerequisites for learning.

Keep track of your pupils' understanding throughout the lesson with helpful **progress check questions**.

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# COLLINS CONNECT

### Collins Connect

Collins Connect is an innovative online learning platform that supports both teachers and pupils by providing a wealth of content and digital resources. Ideal as a front-of-class teaching and learning tool. Collins Connect also facilitates independent learning and supports you in keeping parents up-to-date with current teaching



On Collins Connect you will find the easy-to-use Busy Ant Maths planning tool which is simple to implement across schools and offers teachers the freedom to customise their maths programme of study to suit their own needs.



SIGN UP FOR A FREE 14 DAY TRIAL OF COLLINS CONNECT TODAY -VISIT CONNECT.COLLINS.CO.UK FOR MORE INFORMATION

# RECORD-KEEPING ON COLLINS CONNECT

Class Records can be accessed from the home screen of Busy Ant Maths on Collins Connect. The system will automatically remember your class, and will take you through to the class summary. Records can also be accessed directly from the relevant week within the 'Teach' section of Busy Ant Maths on Collins Connect.





Built in mechanism for recording the class results for each Attainment Target



Automatic date stamping keeps each pupil's records of achievement and teacher comments up-to-date

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Collins Connect supports teachers when it comes to assessment with an easy-to-use online Record-Keeping Tool. Simply drag-and-drop pupils into the relevant mastery level:

green = mastery achieved and exceeded

amber = mastery achieved

red = mastery not yet achieved

# REACH EVERY CHILD

### THE BUSY ANT MATHS PUPIL BOOK

With three levels of differentiated challenge built-in to each lesson within the Pupil Books, as well as extra consolidation and extension activities within the Progress Guide, Busy Ant Maths ensures rapid progression for every child.

> "The children really enjoy the books and the colours. The word "challenge"...is really the vocabulary that extends their learning... Having it in the book itself takes them to want to become independent..."

Laura Reynolds, Year 3 Co-ordinator, South Farnham School

(|||



Year 4, Unit 1, Week 3, Lesson 4 Extension

Rangoli patterns Make patterns by repeatedly reflecting



Date

- You will need: • ruler
- sharp pencil
- coloured pencils

shapes in lines of symmetry Rangoli is a decorative design made in living rooms and on courtyard floors during Hindu festivals. Follow these steps to make your Rangoli pattern.

- Draw 5 lines in the top left-hand square.
- Reflect the lines in the horizontal and then in the vertical lines of symmetry. Now reflect the lines in the diagonal lines of symmetry. You might want to
- draw the diagonal lines of symmetry first. Work out a symmetrical colouring plan and colour your design.











# SUPPORT PUPIL PROGRESSION

### THE BUSY ANT MATHS PROGRESS GUIDE

The Progress Guide provides support resources for those children who need extra practice to gain mastery of lesson objectives, while also offering extension resources for children who need an extra level of challenge.



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# ENSURE PROGRESSION AND MASTERY FOR EVERY CHILD

### THE BUSY ANT MATHS HOMEWORK GUIDE

The Busy Ant Maths Homework Guides provide a great way to check children's understanding of the lesson objective as well as providing practice and consolidation opportunities.



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# BUSY ANT MATHS GAMES

As part of the Collins Connect package, Busy Ant Maths includes 16 games designed to help children develop their mathematical fluency in a fun way. Each game has three levels of difficulty and the option to have a timed or an un-timed game. At the end of each session, the child gets a certificate of achievement with the statistics of their session. This really adds to children's enjoyment of maths as they start to 'get it'!



Visit **connect.collins.co.uk** to try Busy Ant Maths Games with your class! Includes a new Times Tables Simulator ideal practice for the the new on-screen test!

### BUSY ANT MATHS TOOLS

Help children to develop their mential fluency in basic numerical skills with our Busy Ant Maths Tools. The 32 interactive whiteboard (IWB) teaching tools have been developed to support the teaching of maths in your classroom, and cover all the strands and domains of the primary maths curriculum. Accessible on Collins Connect, Busy Ant Maths Tools ensure pupil engagement and support you in the development of interactive maths lessons.

## BUSY ANT MATHS SLIDESHOWS

Fully editable slideshows are available on Collins Connect. Colourful, engaging and specific to the lesson you are teaching, these slideshows save you time and effort and help keep children engaged during the lesson.

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# Collins

### PRICING STRUCTURE

The prices shown here are for each individual component, and for subscriptions to Busy Ant Maths on Collins Connect. If you are a small school, or in a group of schools looking to resource collectively we can discuss a package and price that suits your requirements.

(Small school = 100 pupils or fewer)

Title	ISBN	Price	QTY
Foundation			
Foundation Teacher's Guide	9780008124625	£100.00	
Foundation Activity Book	9780008124649	£3.00	
Foundation Homework Guide	9780008124632	£40.00	
1 year subscription to Collins Connect - Foundation	9780008124656	£200.00 (+VAT)	
3 year subscription to Collins Connect - Foundation	9780008125219	£500.00 (+VAT)	
Year 1			
Year 1 Teacher's Guide	9780007568178	£100.00	
1 Year subscription to Collins Connect - Year 1	9780007574773	£200.00 (+VAT)	
3 year subscription to Collins Connect - Year 1	9780007574834	£500.00 (+VAT)	
Year 1 Activity Book 1A	9780007568192	£3.00	
Year 1 Activity Book 1B	9780007568208	£3.00	
Year 1 Activity Book 1C	9780007568215	£3.00	
Year 1 Progress Guide	9780007568253	£45.00	
Year 1 Homework Guide	9780007568277	£32.00	
Year 1 Assessment Guide	9780007568154	£75.00	
Year 1 Test Pack February 2016	9780008167363	£59.00	
Year 1 Stretch and Challenge February 2016	9780008167301	£75.00	
Year 2			
Year 2 Teacher's Guide	9780007568185	£100.00	
1 Year subscription to Collins Connect - Year 2	9780007574780	£200.00 (+VAT)	
3 Year subscription to Collins Connect - Year 2	9780007574841	£500.00 (+VAT)	
Year 2 Activity Book 2A	9780007568222	£3.00	
Year 2 Activity Book 2B	9780007568239	£3.00	
Year 2 Activity Book 2C	9780007568246	£3.00	
Year 2 Progress Guide	9780007568260	£45.00	
Year 2 Homework Guide	9780007568284	£32.00	
Year 2 Assessment Guide	9780007568161	£75.00	
Year 2 Test Pack February 2016	9780008167370	£59.99	

#### YOUR DETAILS

Name:
Position:
School Name and address:
Postcode:
Telephone:
Email:

#### Terms and Conditions:

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Year 3			
Year 3 Teacher's Guide	9780007562350	£100.00	
1 Year subscription to Collins Connect - Year 3	9780007574797	£200.00 (+VAT)	
3 Year subscription to Collins Connect - Year 3	9780007574858	£500.00 (+VAT)	
Year 3 Activity Book 3A	9780007562374	£7.00	
Year 3 Activity Book 3B	9780007562381	£7.00	
Year 3 Activity Book 3C	9780007562398	£7.00	
Year 3 Progress Guide	9780007562435	£45.00	
Year 3 Homework Guide	9780007562459	£32.00	
Year 3 Assessment Guide	9780007562336	£75.00	
Year 3 Test Pack February 2016	9780008167387	£59.99	
Year 3 Stretch and Challenge February 2016	9780008167325	£75.00	
Year 4			
Year 4 Teacher's Guide	9780007562367	£100.00	
1 Year subscription to Collins Connect - Year 4	9780007574803	£200.00 (+VAT)	
3 Year subscription to Collins Connect - Year 4	9780007574865	£500.00 (+VAT)	
Year 4 Activity Book 4A	9780007562494	£7.00	
Year 4 Activity Book 4B	9780007562411	£7.00	
Year 4 Activity Book 4C	9780007562428	£7.00	
Year 4 Progress Guide	9780007562442	£45.00	
Year 4 Homework Guide	9780007562466	£32.00	
Year 4 Assessment Guide	9780007562343	£75.00	
Year 4 Test Pack February 2016	9780008167394	£59.99	
Year 4 Stretch and Challenge February 2016	9780008167332	£75.00	

### HOW DO I FIND OUT MORE?



CONTACT THE SPECIAL BUSY ANT CONSULTANT IN YOUR AREA: www.collins.co.uk/findyourrep

KEEP UP-TO-DATE WITH BUSY ANT MATHS AT www.collins.co.uk/busyantmaths

#### INTERNATIONAL SCHOOLS: email collins.international@harpercollins.co.uk

#### RETURN THIS FORM TO: Collins, FREEPOST RTKB-SGZT-ZYJL, Honley, HD9 6QZ Email: education.marketing@harpercollins.co.uk with your order, quoting BAM011

Year 5			
Year 5 Teacher's Guide	9780007568314	£100.00	
1 Year subscription to Collins Connect - Year 5	9780007574810	£200.00 (+VAT)	
3 Year subscription to Collins Connect - Year 5	9780007574872	£500.00 (+VAT)	
Year 5 Activity Book 5A	9780007568338	£8.00	
Year 5 Activity Book 5B	9780007568345	£8.00	
Year 5 Activity Book 5C	9780007568352	£8.00	
Year 5 Progress Guide	9780007558254	£45.00	
Year 5 Homework Guide	9780007568680	£32.00	
Year 5 Assessment Guide	9780007568291	£75.00	
Year 5 Test Pack February 2016	9780008167400	£59.99	
Year 5 Stretch and Challenge February 2016	9780008167349	£75.00	
Year 6			
Year 6 Teacher's Guide	9780007568321	£100.00	
1 Year subscription to Collins Connect - Year 6	9780007574827	£200.00 (+VAT)	
3 Year subscription to Collins Connect - Year 6	9780007574889	£500.00 (+VAT)	
Year 6 Activity Book 6A	9780007568369	£8.00	
Year 6 Activity Book 6B	9780007568376	£8.00	
Year 6 Activity Book 6C	9780007568383	£8.00	
Year 6 Progress Guide	9780007568390	£45.00	
Year 6 Homework Guide	9780007568406	£32.00	
Year 6 Assessment Guide	9780007568307	£75.00	
Year 6 Test Pack February 2016	9780008167417	£59.99	
Year 6 Stretch and Challenge February 2016	9780008167356	£75.00	
	P&P	£4.95	
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