



Unlock the power of learning maths in English



# max maths primary

A Singapore Approach

PRIMARY • YEARS 1 – 6



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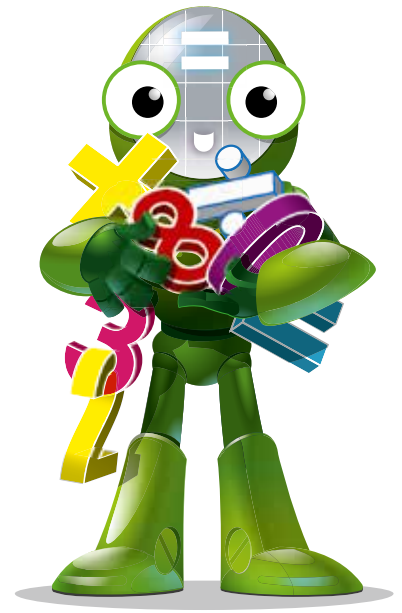
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# Max Maths Primary

**Max Maths primary: A Singapore Approach** is a highly effective approach to teaching maths, based on research and substantial evidence, where ALL pupils succeed. Each core mathematics concept is taught through a method called Concrete, Pictorial and Abstract.

This methodology ensures students learn to think mathematically as opposed to learning by rote topics and concepts they just don't understand. Max Maths primary, A Singapore Approach will help them develop higher level cognitive skills which will support deeper learning and enable greater progression. The materials take the form of engaging Student Books, Workbooks, Journals and Teacher Guides. The Student Books and Teacher Presentation Kits are available as digital resources.



## How Max Maths primary Adds Up



- A consistent approach is used throughout the resources to develop thinking and problem solving skills through both independent and collaborative learning.
  - Each resource uses real-world contexts to teach mathematical concepts, and activities that support the Concrete-Pictorial-Abstract (CPA) approach. This approach has been proven to develop highly skilled young mathematicians.
  - There are clear explanations of new mathematical terms, with colour illustrations to support students whose first language is not English. The Teacher Guide also supports teachers by highlighting the language that needs to be learnt in each unit, giving both learner and teacher the tools they need to succeed.
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- It is a 100% match to the Cambridge Primary Maths Curriculum Framework (stages 1-6)
  - It is an accessible and effective approach with carefully scaffolded activities throughout, ensuring all pupils understand each concept and are confident to move to the next stage.
  - It is supported by two specially designed professional development courses. These courses are designed to explain the concepts of Asian Maths pedagogy and how to use them to teach in the classroom. There is also a specific teacher training course to support the teaching of Maths to students whose first language is not English.



# International Curriculum Teacher Training



## TEACHING THROUGH ENGLISH: Primary Maths Training

The Teaching Through English: Primary Maths teacher development programme has been designed in conjunction with NILE to support primary maths and science teachers, with a specific focus on supporting teachers and learners who may not have English as their first language. The ability to read, understand and answer questions on mathematical problems and concepts in English is an essential element of learning primary maths. The online course provides a step-by-step approach for teachers to apply in the classroom, developing teachers' confidence and skills in supporting young learners.

*Further details about this training programme, and information on how to register can be found on [macmillanic.com/maxmaths](http://macmillanic.com/maxmaths)*

## World Class Maths: Asian Maths Pedagogy

Our vision is to deliver innovative solutions that will drive student performance and help educators and institutions to achieve excellent results. Providing training that is relevant and accessible to all is one key way we can support those schools that are using our materials.

Our MOOC, entitled World Class Maths: Asian Maths Pedagogy is designed to present mathematics pedagogies and best practices implemented in the highest performing countries and education systems. The programme is designed for teachers who may be implementing Asian Maths pedagogy and methods at their school, school administrators and individuals such as parents, who are generally interested in knowing more about Asian maths approaches. The course is led by Dr Christian Bokhove, Associate Professor at the University of Southampton, UK. He is a world leading expert in mathematics education, with a particular focus on curriculum, classroom instruction, assessment, teacher professional development and comparison of East and West.



*Further details about this training programme, and information on how to register can be found on [www.futurelearn.com/courses/world-class-mathspractice](http://www.futurelearn.com/courses/world-class-mathspractice)*



# The Max Maths Formula

<b>STUDENT BOOKS</b> (Print and Digital Formats available)	The Student Book forms the basis for classroom learning and is in full colour throughout. They guide learners through each mathematical concept. Each new topic has a clear introduction followed by whole class activities to embed the learning. Also included are group and consolidation activities that enable cooperative learning, critical thinking, communication and creativity. Additional practice is clearly linked to the workbooks. End of topic activities test language comprehension as well as topic knowledge.
<b>WORKBOOKS</b>	These are designed for extended practice and consolidation in class, with plenty of additional activities that enable self-guided problem solving. Each topic is clearly cross-referenced through the Student Book. At the end of each Stage, students have a workbook which they can refer back to and shows their progression.
<b>JOURNALS</b>	The Journals provide a way to involve parents in the learning process and are designed to be taken home to build upon the work in the classroom and develop students' maths vocabulary skills. Reinforcing the Singaporean Approach they provide a framework for students to reflect on their learning.
<b>TEACHER'S GUIDE</b>	The Teacher's Guide comes with full support to guide teachers through each topic, including English language support. A suggested instructional approach, assessment, additional class activities and full answers are provided.
<b>TEACHER'S PRESENTATION KIT</b>	The Teacher's Presentation Kit is a digital resource that offers a suite of easy-to-use materials for interactive whiteboards or projectors. It includes an enhanced digital version of the Student Book for front of class teaching as well as downloadable and printable activity sheets for whole class engagement and additional vocabulary support. A classroom management tool, teacher's notes and full answers are also included.








## Counting to 10


### Let's Learn Together


1 Count to 10.




1 one 





2 two 





3 three 



4 four 



5 five 

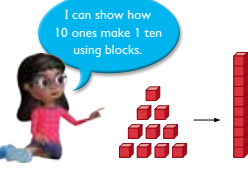


Student Book 1

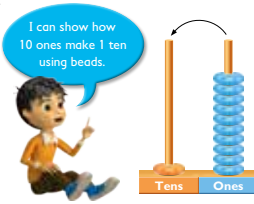
## Counting up to 1 000

### Let's Learn Together

1 Recall that 10 ones make 1 ten.

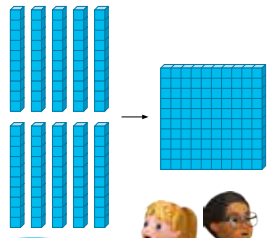
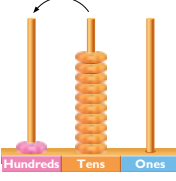


I can show how 10 ones make 1 ten using blocks.




I can show how 10 ones make 1 ten using beads.


Also recall that 10 tens make 1 hundred.

I can show how 10 tens make 1 hundred using blocks.



I can show how 10 tens make 1 hundred using beads.

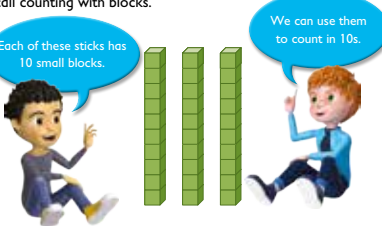


Student Book 3

## Counting to 10 000

### Let's Learn Together

1 Recall counting with blocks.



Each of these sticks has 10 small blocks.



We can use them to count in 10s.

(a) Each small block represents one. We can use these blocks to count in ones.



1 one, 2 two, 3 three, 4 four, 5 five, 6 six

It's easy to count from one to ten. Let's try something more difficult.

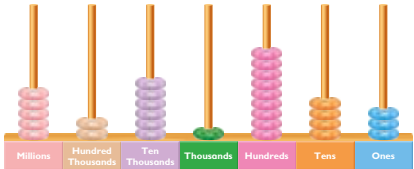



Student Book 4

## Numbers to the millions

### Let's Learn Together


1 Look at the beads below. Can you write the number they represent? Can you write the number in words?



5	0	0	0	0	0	0	0	five million
	2	0	0	0	0	0	0	two hundred thousand
		6	0	0	0	0	0	sixty thousand
			1	0	0	0	0	one thousand
				9	0	0	0	nine hundred
					4	0	0	forty
						3	0	three
5	2	6	1	9	4	3		

$5\,000\,000 + 200\,000 + 60\,000 + 1\,000 + 900 + 40 + 3 = 5\,261\,943$

We read and write 5 261 943 as five million, two hundred and sixty-one thousand, nine hundred and forty-three.



Student Book 6



# Journals

I understand   
 I understand a bit   
 I need more time to understand this

**4 How well do you understand this topic now? Circle one face for each statement.**

- I can explain why changing the order of addition does not change the total.
- I can use the signs +, -, = in number sentences.
- I can write number sentence families.

**5 Ask an adult at home to read and sign this.**  
 I have checked learning on this topic.  
 We have shared some understanding at home.

Signed \_\_\_\_\_  
 Date \_\_\_\_\_  
 Teacher comment \_\_\_\_\_  
 \_\_\_\_\_  
 Date \_\_\_\_\_

30 3 Subtraction within 20

Journal Book 1

**Estimating**

We have been grouping objects in tens to make a sensible estimate of a number as a range.

I think there are between 50 and 70 buttons.      Hmmm, I think there are between 40 and 60 buttons.

Samir      Padma

Do you agree with Samir's or Padma's estimate?  
 Tell an adult and explain how you worked out your estimate. Now count how many buttons there are. Are you surprised by who was correct?

1 Numbers up to 1000 11

Journal Book 2

**Check your maths!**

**1 Insert the correct percentage and fraction shown in these grids. The first one has been done as an example.**

**a**     **b**

**2 Complete the following.**

**a** 25%        **b** 6%   

**c**         **d**    

72 10 Percentages

Journal Book 5

**Practising my maths language**

**1 Look at the diagram below showing the children's favourite sports.**  
 $\frac{12}{24}$  of the children prefer athletics.     $\frac{4}{24}$  of the children prefer tennis.  
 $\frac{8}{24}$  of the children prefer football.

athletics      tennis      football

Write each fraction using its simplest form.

**a**  of the children prefer athletics.  
**b**  of the children prefer tennis.  
**c**  of the children prefer football.

**2 Read the sentences below about finding the simplest form. Place a tick next to those you agree with and a cross beside those you don't agree with. If you disagree, write why.**

**a** Using the simplest form helps me to understand more difficult fractions easily. For example,  $\frac{3}{4}$  is easier to read and use than  $\frac{54}{72}$ .

**b** Reducing a fraction involves dividing the numerator and the denominator by the same whole number.

**c** It is possible to reduce all fractions.

**d** Reducing a fraction is just the same as finding an equivalent fraction.

**e** You need a good knowledge of factors, multiples and division to find the simplest form of fractions.

78 8 Fractions

Journal Book 6




## 1 Numbers up to 20

### Practice 1: Counting to 10


1 Count the following items.

**Example**




There are  balls.

(a)




There is  football.

(b)



There are  basketballs.

(c)



There are  baseballs.

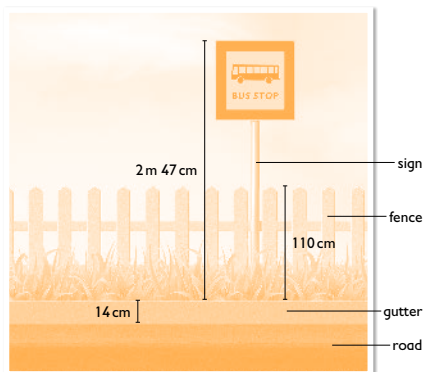
I need help counting the balls.

Let's count together.

Workbook 1

### Practice 3: Adding and subtracting lengths

1 Complete the following.  
The sign and the fence are partially covered by the grass.



(a) Find the height of the fence from the road.

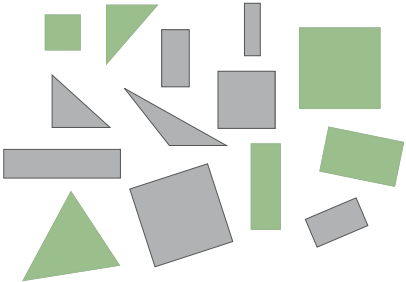
m  cm +  m  cm =

So, the height of the fence from the road is  m  cm.

Workbook 3

### Practice 2: Classifying shapes

1 The shapes below can be grouped in 2 ways. Put a tick in the box for each correct classification.



(a)  Groups of squares and triangles

(b)  Groups of triangles, squares and circles

(c)  Groups of squares, triangles and rectangles

(d)  Groups of grey and red shapes


(e)  Groups of green and red shapes

(f)  Groups of grey and green shapes

Workbook 4

### Practice 2: Expressing one quantity as a percentage of another quantity

1 Toby bought some eggs.  
Express the number of white eggs as a percentage of the total number of eggs.



There are  white eggs.  
There are  eggs altogether.

Fraction of white eggs =  $\frac{\text{input}}{\text{input}}$

**Method 1**  
Find an equivalent fraction that has a denominator of 100.

$\frac{\text{input}}{\text{input}} = \frac{\text{input}}{100}$

$\frac{\text{input}}{\text{input}} = \text{input} \%$

So,  % of the eggs are white.

**Method 2**

$\frac{\text{input}}{\text{input}} \times 100\% = \text{input} \%$

So,  % of the eggs are white.

Workbook 6





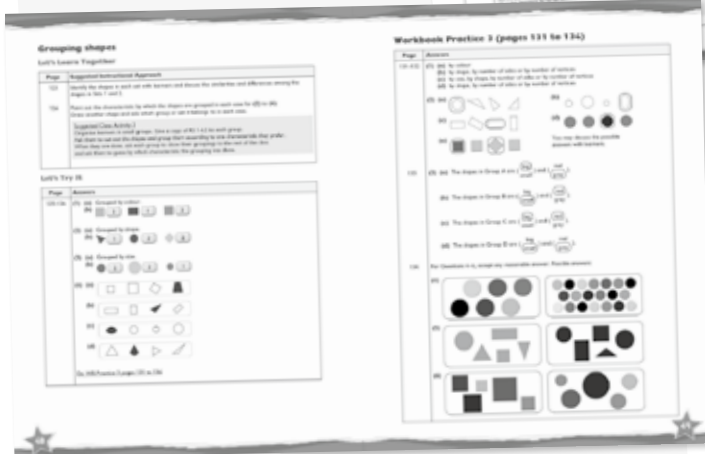
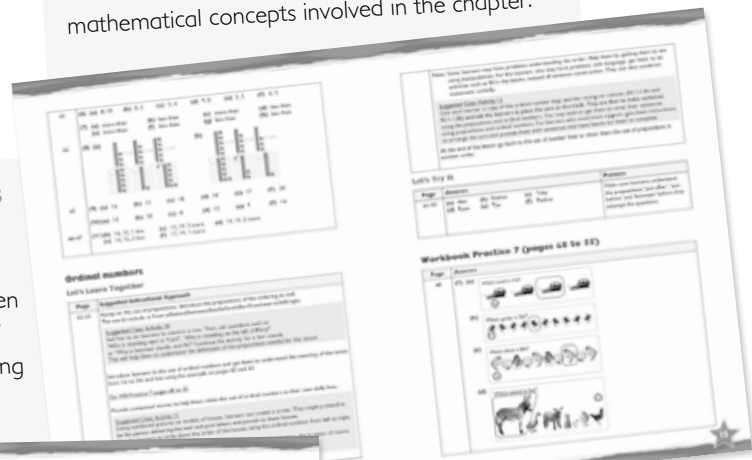
## Teacher's Guide features

### Suggested Instructional Approach

These suggested approaches involve whole-class interactive discussion that focuses on the key mathematical concepts involved in the chapter.

### Suggested Class Activities

Class activities are practical tasks that learners are encouraged to participate in. The activities are often games or a practical application of the key mathematical concepts being explored within the chapter.



### Student book and workbook references

References to student book and workbook pages provide easy access to the correct pages in each document when you are planning and teaching.

### Answers

Answers are provided for all student book and workbook questions.



UPPER PRIMARY – SECONDARY • YEARS 6 – 11

This unique and powerful digital learning platform will help improve your students' ability, and results in mathematics.

Built on the award-winning technology created by bettermarks GmbH, Max Maths Adaptive Practice is an online system that enables individual students to learn from their mistakes.



## Teach

Introduce the topic in the lesson as you usually would.

## Assign

Give exercises to your students.

## Work

The students work through the exercises on the computer.

## Evaluate

Evaluate the results with the click of a button.

## Follow up

Repeat material or move on to the next topic.

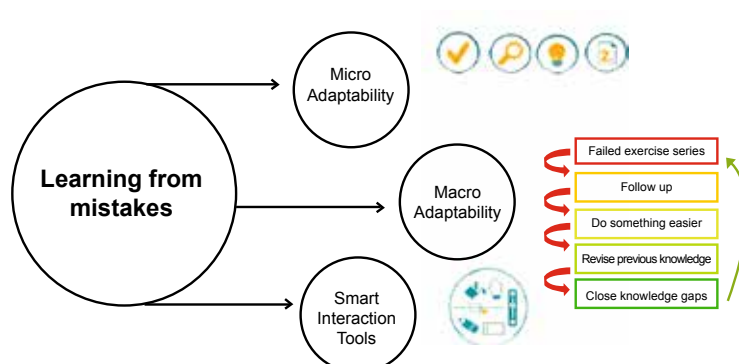
The Max Maths Adaptive Practice system has the following characteristics:

- Micro Adaptivity
- Macro Adaptivity
- Smart Interaction Tools

**Micro Adaptivity:** Max Maths Adaptive Practice offers interaction tools that enable every possible mistake to be made. It recognises the student input and gives feedback. Additional explanations for every exercise step ensure students fully grasp the concept.

**Macro Adaptivity:** Students who miss a lesson or forget something will fall behind. Max Maths Adaptive Practice detects the kind of knowledge gaps from the patterns of mistakes made, and gives students a series of exercises that teach the missing skill.

**Smart Interaction Tools:** It's not only the variety of exercises, but the variety of interaction tools that inspire that 'aha effect' – enabling students to grasp concepts. Other platforms may only use text input or multiple choice questions, whereas Max Maths Adaptive Practice uses over 100 interaction tools such as formula input, drag and drop, sorting, colouring shapes, constructing charts and tree diagrams, plotting functions, drawing points, lines, angles, circles and more.



# MACMILLAN MATHS: PROBLEM SOLVING BOXES



**PRIMARY • YEARS 1 – 6**

Our problem-solving boxes are designed to take learners on a creative learning journey!

Students are encouraged to use real contexts to apply the mathematics they have learned in lessons, or use their skills to pose problems for their peers. Presented in a flexible, supplementary format, they are an easy, out-of-the-box resource for additional practice that will challenge students to think deeply and laterally to develop a full understanding and firm grasp of mathematical concepts.

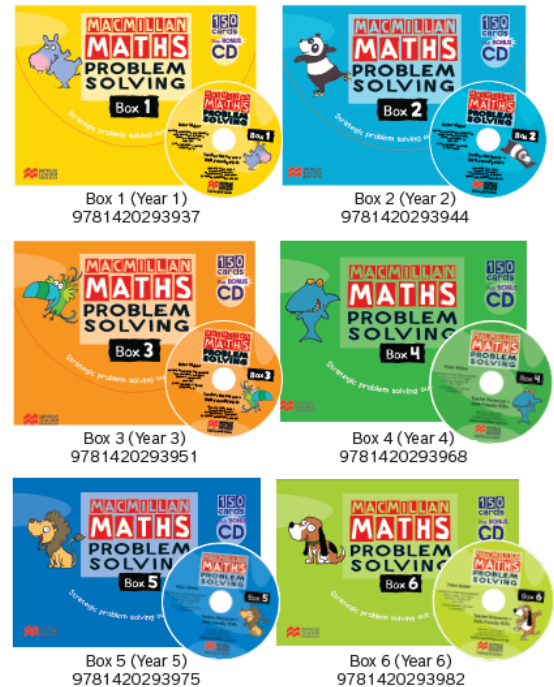
Each box contains 150 enticing cards to develop and strengthen problem-solving strategies across:

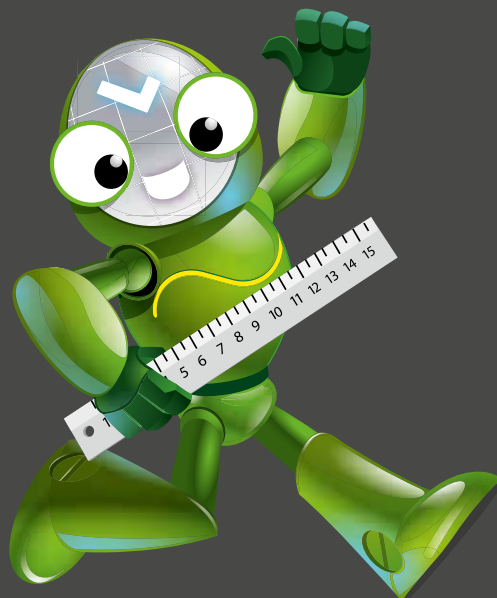
- Number and Algebra
- Measurement and Geometry
- Statistics and Probability.

Extension activities are also included.

The digital offering provides:

- IWB-friendly PDFs of all cards and blank card templates
- a teaching guide
- assessment guidelines and rubric
- posters
- record sheets, answers and index.








## Max Maths primary: A Singapore Approach

	Book 1	Book 2	Book 3	Book 4	Book 5	Book 6
Student Book	9781380008749	9781380012647	9781380012654	9781380012661	9781380012678	9781380012692
Student Book + Digital Student Book	9781380022196	9781380022257	9781380022318	9781380022370	9781380022431	9781380022493
Digital Student Book	9781380022172	9781380022233	9781380022295	9781380022356	9781380022417	9781380022479
Workbook	9781380017741	9781380017789	9781380017826	9781380017864	9781380017901	9781380017949
Teacher's Presentation Kit	9781380022189	9781380022240	9781380022301	9781380022363	9781380022424	9781380022486
Teacher Guide	9781380017758	9781380017796	9781380017833	9781380017871	9781380017918	9781380017956
Journal	9781380024800	9781380024817	9781380024824	9781380024831	9781380024848	9781380024855

For further information on any of our resources, to find your local representative, or request our full catalogue, please contact [international.curriculum@macmillaneducation.com](mailto:international.curriculum@macmillaneducation.com)

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