The home-grown programme for teaching world-class maths lessons

Let’s get started!
Welcome to Rising Stars Mathematics

What is Rising Stars Mathematics?

5 steps to using Rising Stars Mathematics in your school

Take a look at Rising Stars Mathematics

How much does Rising Stars Mathematics cost?
What is Rising Stars Mathematics?

*Rising Stars Mathematics* is a high-quality primary mathematics programme developed to help *all* children master the new curriculum. The programme offers a complete solution to primary maths, adapting the best teaching and learning approaches from the UK, Shanghai and Singapore to develop maths mastery in every classroom.

With *Rising Stars Mathematics* all teachers can:

- design high-quality lessons that cover the new programme of study
- save hours of preparation time with ready-made resources
- build background subject knowledge with short, sharp online CPD
- develop maths mastery in children through varying types of practice.

“*Rising Stars Mathematics* offers flexibility in its approach without deskilling staff, whilst also offering a robust structure and guidance – the perfect blend!”

Peter Richardson, Assistant Head Teacher
The Rising Stars Mathematics approach

*Rising Stars Mathematics* is a complete solution to delivering the new national curriculum for mathematics. It provides a ‘light touch’ yet comprehensive structure that allows teachers to retain the control, freedom and flexibility to adapt the timing and activities to suit the needs of their own class.

*Rising Stars Mathematics* is based on the following key beliefs:

- All children are able to achieve in mathematics given the right support.
- Mathematical understanding is developed through using concrete, pictorial and abstract representations.
- High-quality textbooks used effectively support teachers encourage investigative thinking.
- Children will only fully master concepts through step-by-step teaching and lots of appropriate practice.
- Mathematics is an interconnected subject in which children need to be able to make connections across ideas.
- Rich talk between teachers and children using mathematical terminology is essential in the ongoing assessment of conceptual understanding.
The expertise behind Rising Stars Mathematics

*Rising Stars Mathematics* has been developed by UK mathematics experts and educators to meet the Mathematics Textbook Guidance produced by the NCETM.

- **Caroline Clissold**
  - Caroline is an experienced primary school teacher, mathematics adviser and trainer. She supports teaching and learning in various schools in London and the southeast of England, is an NCETM Accredited Lead and Standard Holder, and author of numerous primary mathematics resources.

- **Emma Low**
  - Emma is an experienced primary school teacher and local authority consultant for numeracy. She is now a freelance mathematics teacher, writer and consultant, specialising in supporting teachers with practical classroom ideas.

- **Paul Broadbent**
  - With over 30 years in primary education as a teacher, trainer and adviser, Paul currently works as an independent maths consultant and adviser. He has written over 400 books for teachers, pupils and parents.

- **Belle Cottingham**
  - Belle is a member of the Mathematical Association and a mathematics consultant and has been running her successful practice since completing her Masters in Mathematics and Learning 8 years ago.

- **Cherri Moseley**
  - Cherri is an active member of the Mathematical Association and works as a freelance mathematics consultant and author. She is an accredited NCETM Professional Development Lead and a mathematics specialist teacher.

- **Linda Glithro**
  - Linda is an experienced teacher and coordinator of primary mathematics and science, having held positions as head and deputy head in state and independent settings across Berkshire and Oxfordshire.

- **Steph King**
  - Steph is a mathematics education adviser and trainer with 25 years’ experience in primary education. She is an NCETM Professional Development Accredited Lead and author of a range of books and resources for teachers and pupils.

- **Heather Davis**
  - Heather taught for 30 years in secondary schools and was head of department for 14 of those. As Lead Consultant for Mathematics with Cornwall Learning she worked extensively with both primary and secondary schools.
## What’s included?

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**FREE 1-year subscription to online CPD and digital resources!**
Five steps to using *Rising Stars Mathematics*

1. **Develop your subject knowledge**
   Watch the short online CPD videos to develop background subject knowledge before planning your lesson.

2. **Design your lessons**
   Read the Teacher’s Guide pages for the relevant unit for ideas on how to introduce, model, teach and assess each concept.

3. **Explore the concepts**
   Use the textbooks as a teaching tool to explore the concepts alongside use of a variety of representations and concrete resources.

4. **Expand understanding**
   Consolidate learning with fun games to aid mastery and deepen understanding with the homework sheets and Practice Books.

5. **Assess mastery**
   Review the topic with assessment tasks to ensure the children have mastered the concepts before moving on.
Applying addition and subtraction

Let’s learn

Addition and subtraction
Remember that larger numbers do not always mean you have to use a formal written method.
Why do you think Amy suggested a mental method for 2500 + 125.5?

Look at the 2 methods used for the subtraction calculation 12 675 – 5248.
Which would you use and why?

Adding and subtracting decimals
1.35 + 1.2
You need to know the place value of the digits in numbers before you calculate.
Look at the same calculation using a mental method and a formal written method.
What is the same? What is different?

Try the subtraction 1.35 – 1.2 using these methods.

Let’s practise

Answer these:
Try these calculations. Remember to think about mental methods first and make an estimate each time:
a 12 500 + 2475
d 15 348 – 9463
g 30 000 – 1478
b 8350 – 2477
e 14 620 – 3520
c 9248 + 1500
f 6250 + 10.55

click to view a full sample unit from the Year 5 Textbook

There is a full-colour, engaging Textbook for each Year Group, designed to aid high-quality teaching and learning.

A set of practice activities is provided per concept, offering bare practice, through to practice in context and then open-ended investigation, to build conceptual understanding and procedural fluency.

At the end of each unit, the Let’s Review tasks provide an opportunity to assess mastery.

E-versions of the Textbooks include animations to bring concepts to life.
Prior learning
Children should already be able to:

• add and subtract whole numbers mentally with increasingly large numbers
• add and subtract whole numbers with four digits, including using formal written methods (columnar addition and subtraction)
• use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy
• solve addition and subtraction multi-step problems in context, deciding which operations and methods to use and why.

Key new learning
• Add and subtract whole numbers with more than four digits, including using formal written methods (columnar addition and subtraction)
• Add and subtract numbers mentally with increasingly large numbers
• Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy
• Solve addition and subtraction multi-step problems in context, deciding which operations and methods to use and why.
• Solve problems involving number up to three decimal places.
• Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements >1 as a mixed number.
• Add and subtract fractions with the same denominator and reason about and describe the new position of the arrow on the fraction model.

Making connections
• Addition and subtraction problems involving measure provide an opportunity to revisit converting units of metric measure so that, e.g. children can give the answer to 1.75 km + 20 m as 1750 m + 20 m or 1775 m or 1.775 km, not 1.751 km or m.
• Convert solving comparison, sum and difference problems using information presented in a line graph, with work in science.

Mathematical focus

• Number: number and place value, addition and subtraction, fractions
• Measurement: capacity, mass, time
• Statistics: solve problems, interpret data

Addition and subtraction and measurement

Encouraging and exploring
You could ask children to look at each picture and the question that goes with each and discuss with a partner. Focus on each picture in turn.

For the picture of the rain gauge, you could:

Discuss what children notice about the container and the level of the water. Encourage them to use the language of capacity and fractions, e.g. the container is more than half full, the water level is at the way up the scale.

Suggest that the container holds one litre of water. Children should draw on knowledge of litre and millilitre conversion and recognise that the scale can be labelled at 0.1 l, 0.2 l, 0.25 l, 0.3 l, etc. or at 100 ml, 200 ml, 300 ml, etc., so the value shown is 0.75 l or 0.75 litres.

Revise the place-value grid to support converting litres to millilitres and vice versa.

For the picture of the measuring jugs:

Discuss what children notice about the container and the level of the water. Encourage them to use the language of capacity and fractions, e.g. the container is more than half full, the water level is at the way up the scale.

Suggest that the container holds one litre of water. Children should draw on knowledge of litre and millilitre conversion and recognise that the scale can be labelled at 0.1 l, 0.2 l, 0.25 l, 0.3 l, etc. or at 100 ml, 200 ml, 300 ml, etc., so the value shown is 0.75 l or 0.75 litres.

Revise the place-value grid to support converting litres to millilitres and vice versa.

For the picture of the pies:

Discuss what children notice about the pie and the fraction of the pie that remains. Children should use fractions to find the fraction of the pie that remains, i.e. ninths with three pieces eaten or sevens with two pieces eaten.

Make up questions for children to answer, including finding the difference using the bar model.

Ask children to compare the fractions and describe them, e.g. the tray of soil and explain their reasoning each time.

For the picture of the mixture task, you could:

Discuss what children notice about the scale and what they agree. They should use representations to prove their thinking and should refer to equivalent fractions.

Marking guidance is provided for all questions and activities.

There is a comprehensive Teacher’s Guide to go with each Textbook. This outlines the focus of the unit, identifies the required prior learning and suggests activities and ways to measure understanding and assess mastery.

The Guides offer inspiration for using the concrete-pictorial abstract approach in your classroom.

There are plenty of ideas for supporting and broadening understanding to ensure all children progress.

Marking guidance is provided for all questions and activities.
The Practice Book

Unit 11
Addition and subtraction using measurement

11a Applying addition and subtraction

1. Use mental methods to answer these.
   a. $3.5 + \quad = 9.25$
   b. $\quad - 4.05 = 7.6$
   c. $\quad + 1.87 = 2$
   d. $6.6 - \quad = 2.9$
   e. $\quad - 2.04 = 7.08$
   f. $1.95 + \quad = 5.19$

2. Answer these.
   a. $6.045 \quad + 19.68$
   b. $15.63 \quad + 40.657$
   c. $59.291 \quad + 3.153$
   d. $23.779 \quad + 8.04$
   e. $7.98 \quad + 7.526$
   f. $64.13 \quad + 9.86$

3. Each plank of wood is 3.45 m in length. Each is cut into two pieces. Calculate the missing lengths.
   a. 1.79 m
   b. 3.14 m
   c. 2.9 m
   d. 0.85 m
   e. 1.503 m
   f. 2.678 m

Regular practice is essential to achieving mastery. The write-in Practice Books provide carefully structured practice, including variation, for all concepts in the Textbooks. They help children to embed their conceptual understanding and dig deeper into concepts through intelligent practice.
The online resource bank

*Rising Stars Mathematics* includes a wealth of high-quality digital resources to complement the printed materials. These can be accessed by all of your teachers via their My Rising Stars account.

**Pupil videos**
Fun animations bring mathematical concepts to life and can used as lesson starters to assess prior learning.

**CPD videos**
Develop understanding of effective pedagogies and secure essential background subject knowledge with a bank of short videos written by our expert author team.

**eTeacher’s Guides**
Digital versions of the Teacher’s Guides enable access to the comprehensive support from any device in just a few clicks.

**Teacher Toolkit**
This interactive Teacher’s Toolkit is ideal for modelling key concepts on the whiteboard, to save you time preparing your own resources.

**eTextbooks**
Bring mathematical concepts to life with these unique digital textbooks, enhanced with animations to engage all children!

**INSET day presentation**
Provide your teaching staff with background information and prepare them to use the scheme with this ready-made INSET day presentation.

Purchase includes one-year FREE subscription to all of the digital resources.
How much does Rising Stars Mathematics cost?

**Complete School Pack**
£2,000
This pack is designed for a single-form primary school and includes:
- 15 copies of each Textbook for Years 1-6 (90 in total)
- One copy of each of the Teacher’s Guides for Years 1-6
- A set of 30 Practice Books per year
- FREE medium-term plans for Years 1-6
- A FREE one-year subscription to the digital resources (worth £250)

**Year Group Pack**
£399
The Year Group Pack includes:
- 15 copies of the Textbook for that Year Group
- One copy of the Teacher’s Guide
- A set of 30 Practice Books for that Year Group
- A FREE one-year subscription to all of the digital resources for that Year Group

Contact your local sales consultant for a bespoke pack tailored to your school’s needs!