

RISING  STARS  
**Maths**

**For the  
2014  
National  
Curriculum**

# Mathematical Vocabulary

**Introduce the right words at the right time  
to ensure progress in primary maths**

- ★ **Indispensable checklists  
for each year group**
- ★ **Guidance on the  
importance of  
spoken language**
- ★ **Organised to support  
the raised expectations  
of the 2014 Programme  
of Study**

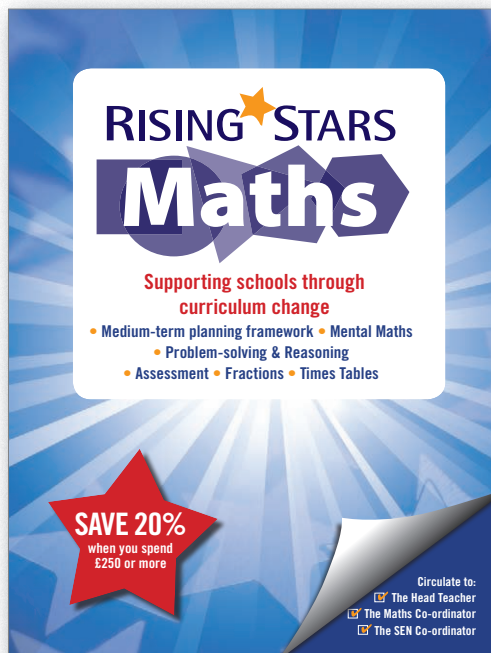


**eBook for use on any device**

# RISING STARS Maths

Rising Stars has worked with leading primary mathematics experts to bring schools the resources they need to deliver the new National Curriculum programme of study for primary mathematics. Take a look at our new and published resources to find out more about how Rising Stars can help raise achievement in your school.

	Planning	Teaching & Learning		Lower attainers	Higher attainers	Embedding learning & homework		Assessment			CPD online courses
KS1	Primary Mathematics Planning Framework 	Fluency with Fractions  	Problem Solving and Reasoning  	Picture Maths  	Maths for the More Able 	Skills Builders Times Tables 	Mathematics Progress Tests  	Mental Maths  	Assessment Tasks 	Essential CPD 	
LOWER KS2	Primary Mathematics Planning Framework 	Fluency with Fractions  	Problem Solving and Reasoning  	Picture Maths  	Maths for the More Able  	Learn, Practise and Revise  	Skills Builders Fractions, Decimals, Percentages  	Mathematics Progress Tests  	Mental Maths  	Assessment Tasks 	Essential CPD 
UPPER KS2	Primary Mathematics Planning Framework 	Fluency with Fractions  	Problem Solving and Reasoning  	Picture Maths  	Maths for the More Able  	Learn, Practise and Revise  	Skills Builders Fractions, Decimals, Percentages  	Mathematics Progress Tests  	Mental Maths  	Assessment Tasks 	Essential CPD 



**RISING STARS  
Maths**

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- Problem-solving & Reasoning
- Assessment • Fractions • Times Tables

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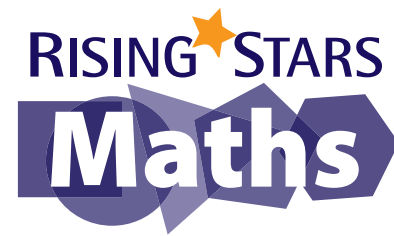
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March 2014



Dear Maths Colleague,

With teaching of the 2014 National Curriculum due to begin in only six months' time, we know how busy you are planning how to implement the new primary mathematics programme of study in your school. As you know, one of the key messages across the curriculum is how important spoken language is in helping children to develop and make progress. Teachers have told us that checklists of mathematical vocabulary for each year level are a useful tool to ensure that the right language is introduced at the right time. Here at Rising Stars we are dedicated to providing resources to support you in every way we can, so that is exactly what you will find in this book! Written by primary maths expert and NCETM Coordinator, Caroline Clissold, you can be sure that the word lists match the expectations of the new curriculum perfectly.

Alongside developing this book of *Mathematical Vocabulary*, we have also been working hard with our partner schools and curriculum specialists to produce a range of flexible maths resources. These are specifically designed for the 2014 curriculum, to give you the confidence to deliver the new mathematics programme of study with ease.

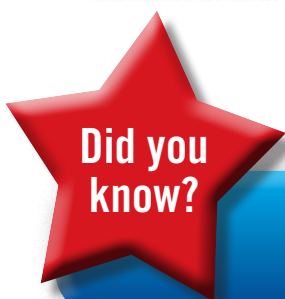
Whether you are looking for resources to help inform your medium-term planning, embed problem-solving, develop reasoning and mental calculation skills, improve teaching of tricky topics such as calculating with fractions, or are looking for help in assessing progress effectively in a world without levels, we hope you will find the resources to suit your individual school's needs at Rising Stars.

We hope you find this *Mathematical Vocabulary* book useful and if you would like to find out more about any of the other Rising Stars Maths resources, please don't hesitate to contact our dedicated customer services team on 0800 091 1602.

With very best wishes,

*Andrea Carr*

Andrea Carr  
Managing Director  
Rising Stars



You can now find fun maths challenges for your class at [www.risingstars-uk.com/mathschallenges](http://www.risingstars-uk.com/mathschallenges)

Have a go at this month's mathematics challenge, written by our maths expert Caroline Clissold!



## THE IMPORTANCE OF SPOKEN LANGUAGE

“The national curriculum for mathematics reflects the importance of spoken language in pupils’ development across the whole curriculum – cognitively, socially and linguistically. The quality and variety of language that pupils hear and speak are key factors in developing their mathematical vocabulary and presenting a mathematical justification, argument or proof. They must be assisted in making their thinking clear to themselves as well as others, and teachers should ensure that pupils build secure foundations by using discussion to probe and remedy their misconceptions.”

**National Curriculum in England, Department for Education, 2013**

Using correct mathematical language is crucial for thinking, learning and communicating mathematically. Children may build knowledge through remembering information that they hear, but it is only when they put these ideas into their own words that it becomes clear whether concepts have been learned effectively. It is in listening to children talking about mathematics that we, as teachers, can best assess what they are actually learning and understanding. This enables us to identify and address any misconceptions that might be developing.

We need to encourage children to explain what they are doing and why they are doing it. We must offer them opportunities to use mathematical language frequently, for example by participating in paired activities, group discussions and games as well as other dialogues. This will help children to learn new vocabulary, to use words they already know more accurately, and to express new ideas and new thinking.

Spoken language in mathematics can be thought of as a rehearsal for recording as well as an outcome in its own right. It allows children to extend and develop their reasoning skills as they explain and justify their thinking. It provides the opportunity to review existing knowledge, to explore new ideas and to extend their understanding.

The productive use of spoken language in mathematics allows children to evaluate their learning, support others’ suggestions, challenge ideas, reason or justify and ask questions. Therefore, it is important to encourage children not just to learn and remember the correct vocabulary, but also to use these words regularly to communicate mathematically. This will play a vital role in enabling children to develop their mathematical thinking, as appropriate use of mathematical language is essential for developing an argument or proof.

Using mathematical vocabulary can help all children to make links across areas of mathematics, across the curriculum as a whole and also within real-life situations. It can especially support lower attainers, enabling them to build confidence, communicate and problem solve, so should be an integral part of every mathematics lesson. Teachers need to plan the introduction of new words into lessons and provide opportunities for children to rehearse and use them on a regular basis so that they begin to remember both the words themselves and their meanings. It is also essential that other adults working with children use mathematical vocabulary accurately and consistently.

# USING MATHEMATICAL VOCABULARY

“Approaches which explicitly aim to develop spoken vocabulary work best when they are related to current content being studied in school and when they involve the active use of the new vocabulary.”

The Education Endowment Foundation, 2014

## Barriers to acquiring mathematical vocabulary

For children to participate effectively in mathematics lessons, they must acquire the appropriate vocabulary to enable them to explain their thinking and make progress in different areas of mathematical knowledge. There are several potential barriers to this, which teachers should consider when using language in the mathematics lesson.

- Many words used in mathematics are terms specific to the subject area which may rarely be encountered outside the lesson, for example, multiple, factor, trapezium, denominator. It is important to introduce these words explicitly first, explaining their meanings clearly.
- Some words used in mathematics have different meanings when used in an everyday English context, for example, face, take away, match, odd, lots of, product. It is important that children explore all the meanings they know for these words first, then focus on the mathematical definitions to understand how the terms are used in a mathematical context. Using specific mathematical vocabulary, such as ‘multiplied by’ instead of ‘lots of’ can help to avoid confusion.
- Misconceptions can arise when mathematical vocabulary is used imprecisely. For example, imprecise and ambiguous descriptions of a rectangle as ‘a shape with four right angles and two

pairs of equal sides’, could lead to children not recognising that a square is also a rectangle, or not understanding that a rectangle is also a type of parallelogram and quadrilateral. A good definition should be complete and concise, for example ‘a rectangle is a four-sided shape, all four of whose angles are right-angles’. It is important that teachers, teaching assistants and other adults are consistent in their use of mathematical language.

## Introducing new mathematical language

Children should be introduced to the appropriate vocabulary at a time when it is relevant and required. As teachers, sometimes we will expect children to remember and begin to use particular terms. On other occasions, we may simply be introducing words so that children can hear their sound and develop a knowledge that a mathematical term exists. For example, when children in Year 1 learn about halves and quarters, to gain a real understanding of what these are they need to know what the numbers that make them represent. It can be useful to introduce the words numerator and denominator to describe the top and bottom numbers of a fraction. At this stage it is not essential that children remember these words, but this modelling will help them become familiar with the terms, gradually beginning to use them accurately and with understanding in later years.

Once new mathematical language has been introduced, children must be allowed to try it out, misuse it, see when it works, and understand how it fits with what they already know. In this way, they will eventually make it their own. We therefore need to ensure that we give children opportunities to speak this mathematical language within conversations rather than simply practising the words. Teachers and other adults in the classroom should be aware of potential misconceptions, for example using the term capacity (rather than volume) to describe the amount of liquid inside a container instead of the amount a container can hold. This type of inaccuracy should be corrected whenever terms are heard being misused.

The final stage of embedding understanding of new mathematical vocabulary is learning to read and write the words, ultimately spelling them correctly. Children should also be provided with opportunities to develop these skills. Providing access to mathematical dictionaries in the classroom and encouraging children to make use of them is especially helpful in securing their knowledge. Asking children to label displays of their work, including writing captions on working walls, will also be useful, as is referring to the words in further sessions.

## USING THIS BOOK

This book provides a series of checklists to support teachers in identifying the words that the children need to understand and use in order to make good progress in mathematics. The book is for class teachers, support staff and any other adults in the classroom. It may also be helpful to share lists of relevant key words with parents and carers on a regular basis to enable them to focus on certain vocabulary at home to support learning.

The checklists have been organised by year group to provide relevant vocabulary for each domain in the 2014 National Curriculum in England: mathematics programme of study for key stages 1 and 2. Where appropriate, words have been further classified into specific areas. For example, the lists of words for the Measurement domain contain words related to length, weight, capacity and volume, time, temperature and money, as well as general measurement vocabulary.

The book begins with the vocabulary that the children should be introduced to in the Mathematics area of the Statutory Framework for the Early Years Foundation Stage. It progresses through KS1 and KS2 to the words that children would be expected to know and be able use in Year 6. The words listed for each year group include all the vocabulary from the previous year/s for reference, with new words for that year highlighted in red from Year 1 onwards.

These lists will help teachers identify key language for a topic and integrate their use into lesson plans. They can then ensure that new vocabulary is introduced at the right time and that familiar words continue to be consolidated. When working on a particular topic it is helpful to display the appropriate vocabulary in the classroom. In this way children are reminded of the words that they need to know and use. If space allows, include symbols, diagrams and drawings to illustrate the meanings of new words visually. Providing mathematical dictionaries near to the display will encourage children to look up any words they don't know. The checklists are suggestions of vocabulary appropriate for each area of mathematics at each year level to ensure that children are equipped with the language they need to make expected levels of progress. Though comprehensive, the checklists are not necessarily exhaustive and more words can be added if you wish.

## Vocabulary development

It is important to introduce children to the correct vocabulary at the appropriate time and within a suitable context. It is often helpful to do this using relevant real-life objects, mathematical manipulatives and visual representations such as pictures and diagrams. All children need regular, planned opportunities to develop their mathematical vocabulary in order that they become familiar with the language and are not confused by mathematical terms. They need to acquire the words necessary for them to take part in lessons and activities, respond to questions correctly and carry out tasks successfully. Fun games and activities, such as the following example, can be a useful way to rehearse words and their meanings regularly.

### ‘Just a minute’ word game

Choose a topic that the class is working on. Write up to 20 relevant mathematical words on separate pieces of card. Ensure that familiar as well as new words are included. Create enough sets of cards for small groups of children to use. Demonstrate what the children need to do: say the meanings of the words on the cards. Ask the children to identify the word you are describing. How many can they say correctly in one minute?

Next, organise children into mixed-attaining groups and give each group a set of cards. Choose the most confident child to begin describing the words on the cards as you previously demonstrated. After a minute, the describer role passes to the next most confident learner. Repeat until all the children have taken a turn, finishing with the least confident learner. The children can use or adapt each other’s definitions or create descriptions of their own. For each turn, the group should note how many words were identified correctly. Does their score improve by the final turn?

## EFFECTIVE QUESTIONING

Whilst children may be able to remember new terms, learning the meanings of words requires more than memorisation. To help children understand mathematical ideas and support them in using mathematical terms correctly, it is vital to employ a variety of questioning techniques to promote good dialogue in mathematics lessons.

### Open and closed questions

As teachers, we should be asking a variety of types of question. Effective questioning will include both closed questions with a single correct answer (*What sort of number do you get when you add two odd numbers together?*) and open questions with a number of possible answers to encourage children to think more deeply (*What sort of numbers do you get when you add three consecutive numbers together?*). Encouraging children to explain their thinking and methods is also vitally important. The answers given will provide teachers with useful assessment opportunities and evidence of children’s level of understanding. Follow-up questions such as *How do you know?* or *What makes you think that?* as well as *Can you give me another example?* are essential to probe, develop and consolidate understanding.

Planning open questions that have more than one answer or more than one route to arrive at an answer gives more children a chance to respond. Open questions can also offer greater challenge and extension opportunities for higher-attaining children, encouraging them to search for alternative, less obvious or more general answers.

### Question types

Sometimes we may just want to ask questions to check the recall of facts, for example, *What is 6 multiplied by 9?*



*What is  $23 + 27$ ? Sometimes we may ask questions that involve applying those facts, for example, *What are the factors of 42?* *What are some multiples of 8?* The ability to recall and apply knowledge is key to becoming fluent in the fundamentals of mathematics. However, children should also be asked questions that require a higher level of thinking. This is important to develop conceptual understanding, to encourage children to follow lines of enquiry and justify their reasoning, and to assist them in seeking solutions to problems.*

Questions that can help to develop more complex thinking, include those which require children to:

- predict or hypothesise  
*Roughly how much is 51 multiplied by 47?*  
*Estimate the number of counters in the tray.*
- represent mathematical ideas  
*How could you show that on a number line?*  
*Can you represent the problem using counters?*
- apply mathematics to solve problems  
*How could we count these?*  
*How could you test a number to see if it is divisible by 6?*
- make generalisations  
*What does that tell us about numbers that have a 5 or 0 in the ones position?*  
*What can we say about the total angles in a quadrilateral?*
- reason mathematically  
*I have 58p in my pocket, what coins could they be?*  
*Why is the product of two odd numbers always odd?*

## Useful question starters

When planning open questions, the following question stems and sentence starters can be helpful:

- *Explain why ...*
- *I wonder why ...*
- *How do you know ...?*
- *Does anyone know ...?*
- *What will happen if ...?*
- *How will you know ...?*
- *How can we find out ...?*
- *Can you describe ...?*
- *Convince me ...*
- *Is there another way ...?*
- *What makes you think that ...?*

# RISING STARS Mathematical Vocabulary Checklists

## **EARLY YEARS FOUNDATION STAGE to YEAR 6**

# EARLY YEARS FOUNDATION STAGE

## NUMBER

### Number and place value

#### *Number*

zero

number

one, two, three ... to twenty and beyond  
teens numbers, eleven, twelve ... twenty

none

how many ...?

count, count (up) to, count on (from, to),  
count back (from, to)

count in ones, twos, fives, tens

is the same as

more, less

odd, even

few

pattern

pair

#### *Place value*

ones

tens

digit

the same number as, as many as

more, larger, bigger, greater

fewer, smaller, less

fewest, smallest, least

most, biggest, largest, greatest

one more, ten more

one less, ten less

compare

order

size

first, second, third... twentieth

last, last but one

before, after

next

between

#### *Estimating*

guess

how many ...?

estimate

nearly

close to

about the same as

just over, just under

too many, too few

enough, not enough

#### **Addition and subtraction**

add, more, and

make, sum, total

altogether

double

one more, two more ... ten more

how many more to make ...?

how many more is ... than ...?

how much more is ...?

take away

how many are left/left over?

how many have gone?

one less, two less, ten less ...

how many fewer is ... than ...?

how much less is ...?

difference between

#### **Multiplication and division**

sharing

doubling

halving

number patterns

#### **Fractions**

parts of a whole

half

quarter

## MEASUREMENT

measure

size

compare

guess, estimate

enough, not enough

too much, too little

too many, too few

nearly, close to, about the same as

just over, just under

### *Length*

metre

length, height, width, depth

long, short, tall

high, low

wide, narrow

thick, thin

longer, shorter, taller, higher ... and so on

longest, shortest, tallest, highest ... and so on

far, near, close

### *Weight*

weigh, weighs, balances

heavy, light

heavier than, lighter than

heaviest, lightest

scales

### *Capacity and volume*

full

empty

half full

holds

container

### *Time*

time

days of the week, Monday, Tuesday ...

day, week

birthday, holiday

morning, afternoon, evening, night

bedtime, dinner time, playtime

today, yesterday, tomorrow

before, after

next, last

now, soon, early, late

quick, quicker, quickest, quickly

slow, slower, slowest, slowly

old, older, oldest

new, newer, newest

takes longer, takes less time

hour, o'clock

clock, watch, hands

### *Money*

money

coin

penny, pence, pound

price, cost

buy, sell

spend, spent

pay

## GEOMETRY

### **Properties of shape**

shape, pattern

flat

curved, straight

round

hollow, solid

sort

make, build, draw

size

bigger, larger, smaller  
symmetrical  
pattern, repeating pattern  
match

### **2-D shape**

corner, side  
rectangle (including square)  
circle  
triangle

### **3-D shape**

face, edge, vertex, vertices  
cube  
pyramid  
sphere  
cone

### **Position and direction**

position  
over, under  
above, below  
top, bottom, side  
on, in  
outside, inside  
around  
in front, behind  
front, back  
beside, next to  
opposite  
apart  
between  
middle, edge  
corner  
direction  
left, right  
up, down  
forwards, backwards, sideways

across  
next to, close, near, far  
along  
through  
to, from, towards, away from  
movement  
slide  
roll  
turn  
stretch, bend  
whole turn, half turn

## **STATISTICS**

count, sort  
group, set  
list

## **GENERAL**

pattern  
puzzle  
what could we try next?  
how did you work it out?  
recognise  
describe  
draw  
compare  
sort

# YEAR 1

## NUMBER

### Number and place value

#### *Number*

number

numeral

zero

one, two, three ... twenty

teens numbers, eleven, twelve ... twenty

twenty-one, twenty-two ... one hundred

none

how many ...?

count, count (up) to, count on (from, to),  
count back (from, to)

forwards

backwards

count in ones, twos, fives, tens

equal to

equivalent to

is the same as

more, less

most, least

many

odd, even

multiple of

few

pattern

pair

#### *Place value*

ones

tens

digit

the same number as, as many as

more, larger, bigger, greater

fewer, smaller, less

fewest, smallest, least

most, biggest, largest, greatest

one more, ten more

one less, ten less

equal to

one more, ten more

one less, ten less

compare

order

size

first, second, third... twentieth

last, last but one

before, after

next

between

half-way between

above, below

#### *Estimating*

guess

how many ...?

estimate

nearly

roughly

close to

about the same as

just over, just under

too many, too few

enough, not enough

#### *Addition and subtraction*

addition

add, more, and

make, sum, total

altogether

double

near double

half, halve

one more, two more ... ten more

how many more to make ...?

how many more is ... than ...?

how much more is ...?

**subtract**

take away  
 how many are left/left over?  
 how many have gone?  
 one less, two less, ten less ...  
 how many fewer is ... than ...?  
 how much less is ...?  
 difference between

**equals**

is the same as  
 number bonds/pairs  
 missing number

**Multiplication and division**

multiplication  
 multiply  
 multiplied by  
 multiple  
 division  
 dividing  
 grouping  
 sharing  
 doubling  
 halving  
 array  
 number patterns

**Fractions**

fraction  
 equal part  
 equal grouping  
 equal sharing  
 parts of a whole  
 half  
 one of two equal parts  
 quarter  
 one of four equal parts

**MEASUREMENT**

measure  
**measurement**  
 size  
 compare  
 guess, estimate  
 enough, not enough  
 too much, too little  
 too many, too few  
 nearly, close to, about the same as  
**roughly**  
 just over, just under

**Length**

**centimetre**, metre  
 length, height, width, depth  
 long, short, tall  
 high, low  
 wide, narrow  
 thick, thin  
 longer, shorter, taller, higher ... and so on  
 longest, shortest, tallest, highest ... and so on  
 far, near, close  
**ruler**  
**metre stick**

**Weight**

**kilogram**, **half kilogram**  
 weigh, weighs, balances  
 heavy, light  
 heavier than, lighter than  
 heaviest, lightest  
 scales

**Capacity and volume**

litre, half litre

capacity

volume

full

empty

more than

less than

half full

quarter full

holds

container

**Time**

time

days of the week, Monday, Tuesday ...

months of the year (January, February ...)

seasons: spring, summer, autumn, winter

day, week, weekend, month, year

birthday, holiday

morning, afternoon, evening, night

bedtime, dinner time, playtime

today, yesterday, tomorrow

before, after

earlier, later

next, first, last

midnight

date

now, soon, early, late

quick, quicker, quickest, quickly

slow, slower, slowest, slowly

old, older, oldest

new, newer, newest

takes longer, takes less time

how long ago?

how long will it be to ...?

how long will it take to ...?

how often?

always, never, often, sometimes

usually

once, twice

hour, o'clock, half past, quarter past,  
quarter to

clock, clock face, watch, hands

hour hand, minute hand

hours, minutes

**Money**

money

coin

penny, pence, pound

price, cost

buy, sell

spend, spent

pay

change

dear, costs more

cheap, costs less, cheaper

costs the same as

how much ...?

how many ...?

total

**GEOMETRY****Properties of shape**

shape, pattern

flat

curved, straight

round

hollow, solid

sort

make, build, draw

size

bigger, larger, smaller

symmetry, symmetrical, symmetrical pattern

pattern, repeating pattern

match



### 2-D shape

corner, side

point, pointed

rectangle (including square)

circle

triangle

### 3-D shape

face, edge, vertex, vertices

cube, cuboid

pyramid

sphere

cone

cylinder

### Position and direction

position

over, under, underneath

above, below

top, bottom, side

on, in

outside, inside

around

in front, behind

front, back

beside, next to

opposite

apart

between

middle, edge

centre

corner

direction

journey

left, right

up, down

forwards, backwards, sideways

across

next to, close, near, far

along

through

to, from, towards, away from

movement

slide

roll

turn

stretch, bend

whole turn, half turn, quarter turn, three-quarter turn

## STATISTICS

count, sort, vote

group, set

list, table

## GENERAL

pattern

puzzle

problem, problem solving

mental, mentally

what could we try next?

how did you work it out?

explain your thinking

recognise

describe

draw

compare

sort

# YEAR 2

## NUMBER

### Number and place value

#### *Number*

number

numeral

zero

one, two, three ... twenty

teens numbers, eleven, twelve ... twenty

twenty-one, twenty-two ... one hundred, **two hundred ... one thousand**

none

how many ...?

count, count (up) to, count on (from, to),  
count back (from, to)

forwards

backwards

count in ones, twos, fives, tens, **threes, fours and so on**

equal to

equivalent to

is the same as

more, less

most, least

**tally**

many

odd, even

multiple of

**sequence**

**continue**

**predict**

few

pattern

pair, **rule**

**> greater than**

**< less than**

#### *Place value*

ones

tens, **hundreds**

digit

**one-, two- or three-digit number**

**place, place value**

**stands for, represents**

**exchange**

the same number as, as many as  
more, larger, bigger, greater

fewer, smaller, less

fewest, smallest, least

most, biggest, largest, greatest

one more, ten more

one less, ten less

equal to

compare

order

size

first, second, third ... twentieth

**twenty-first, twenty-second ...**

last, last but one

before, after

next

between

halfway between

above, below

#### *Estimating*

guess

how many ...?

estimate

nearly

roughly

close to

about the same as

just over, just under

**exact, exactly**

too many, too few  
enough, not enough

### Addition and subtraction

addition  
add, more, and  
make, sum, total  
altogether  
double  
near double  
half, halve  
one more, two more ... ten more ... **one hundred more**  
how many more to make ...?  
how many more is ... than ...?  
how much more is ...?  
subtract  
take away  
how many are left/left over?  
how many have gone?  
one less, two less, ten less ... **one hundred less**  
how many fewer is ... than ...?  
how much less is ...?  
difference between  
equals  
is the same as  
number bonds/pairs/**facts**  
**tens boundary**

### Multiplication and division

multiplication  
multiply  
multiplied by  
multiple  
**groups of**  
**times**  
**once, twice, three times ... ten times**  
**repeated addition**

division  
dividing, **divide, divided by, divided into**  
grouping  
sharing, **share, share equally**  
**left, left over**  
**one each, two each, three each ... ten each**  
**group in pairs, threes ... tens**  
**equal groups of**  
doubling  
halving  
array  
**row, column**  
number patterns  
**multiplication table**  
**multiplication fact, division fact**

### Fractions

fraction  
**equivalent fraction**  
**mixed number**  
**numerator, denominator**  
equal part  
equal grouping  
equal sharing  
parts of a whole  
half, **two halves**  
one of two equal parts  
quarter, **two quarters, three quarters**  
one of four equal parts  
**one third, two thirds**  
**one of three equal parts**

### MEASUREMENT

measure  
measurement  
size  
compare  
**measuring scale**

guess, estimate  
 enough, not enough  
 too much, too little  
 too many, too few  
 nearly, close to, about the same as  
 roughly  
 just over, just under

### **Length**

centimetre, metre  
 length, height, width, depth  
 long, short, tall  
 high, low  
 wide, narrow  
 thick, thin  
 longer, shorter, taller, higher ... and so on  
 longest, shortest, tallest, highest ... and so on  
 far, **further, furthest**, near, close  
 ruler  
 metre stick, **tape measure**

### **Weight**

kilogram, half kilogram, **gram**  
 weigh, weighs, balances  
 heavy, light  
 heavier than, lighter than  
 heaviest, lightest  
 scales

### **Capacity and volume**

litre, half litre, **millilitre**  
 capacity  
 volume  
 full  
 empty  
 more than  
 less than  
 half full

quarter full  
 holds, **contains**  
 container

### **Temperature**

**temperature**  
**degree**

### **Time**

time  
 days of the week, Monday, Tuesday ...  
 months of the year (January, February ...)  
 seasons: spring, summer, autumn, winter  
 day, week, weekend, **fortnight**, month, year  
 birthday, holiday  
 morning, afternoon, evening, night  
 bedtime, dinnertime, playtime  
 today, yesterday, tomorrow  
 before, after  
 earlier, later  
 next, first, last  
 midnight  
 date  
 now, soon, early, late  
 quick, quicker, quickest, quickly  
 slow, slower, slowest, slowly  
 old, older, oldest  
 new, newer, newest  
 takes longer, takes less time  
 how long ago?  
 how long will it be to ...?  
 how long will it take to ...?  
 how often?  
 always, never, often, sometimes  
 usually  
 once, twice  
 hour, o'clock, half past, quarter past,  
 quarter to  
**5, 10, 15 ... minutes past**

clock, clock face, watch, hands  
 digital/analogue clock/watch, timer  
 hour hand, minute hand  
 hours, minutes, seconds

### Money

money  
 coin  
 penny, pence, pound  
 price, cost  
 buy, bought, sell, sold  
 spend, spent  
 pay  
 change  
 dear, costs more  
 cheap, costs less, cheaper  
 costs the same as  
 how much ...?  
 how many ...?  
 total

## GEOMETRY

### Properties of shape

shape, pattern  
 flat  
 curved, straight  
 round  
 hollow, solid  
 sort  
 make, build, draw  
 surface  
 size  
 bigger, larger, smaller  
 symmetry, symmetrical, symmetrical pattern  
 line symmetry  
 pattern, repeating pattern  
 match

### 2-D shape

corner, side  
 point, pointed  
 rectangle (including square), rectangular  
 circle, circular  
 triangle, triangular  
 pentagon  
 hexagon  
 octagon

### 3-D shape

face, edge, vertex, vertices  
 cube, cuboid  
 pyramid  
 sphere  
 cone  
 cylinder

### Position and direction

position  
 over, under, underneath  
 above, below  
 top, bottom, side  
 on, in  
 outside, inside  
 around  
 in front, behind  
 front, back  
 beside, next to  
 opposite  
 apart  
 between  
 middle, edge  
 centre  
 corner  
 direction  
 journey, route  
 left, right

up, down

higher, lower

forwards, backwards, sideways

across

next to, close, near, far

along

through

to, from, towards, away from

clockwise, anticlockwise

movement

slide

roll

turn

stretch, bend

whole turn, half turn, quarter turn,  
three-quarter turn

right angle

straight line

## STATISTICS

count, tally, sort, vote

graph, block graph, pictogram

represent

group, set

list, table

label, title

most popular, most common

least popular, least common

## GENERAL

pattern

puzzle

problem, problem solving

mental, mentally

what could we try next?

how did you work it out?

show how you ...

explain your thinking

explain your method

describe the pattern

describe the rule

investigate

recognise

describe

draw

compare

sort

mental calculation

written calculation

# YEAR 3

## NUMBER

### Number and place value

#### *Number*

number  
numeral  
zero  
one, two, three ... twenty  
teens numbers, eleven, twelve ... twenty  
twenty-one, twenty-two ... one hundred, two hundred ... one thousand  
none  
how many ...?  
count, count (up) to, count on (from, to),  
count back (from, to)  
forwards  
backwards  
count in ones, twos, fives, tens, threes,  
fours, **eights**, **fifties** and so on to **hundreds**  
equal to  
equivalent to  
is the same as  
more, less  
most, least  
tally  
many  
odd, even  
multiple of, **factor of**  
sequence  
continue  
predict  
few  
pattern  
pair, rule  
**relationship**  
> greater than  
< less than  
**Roman numerals**

#### *Place value*

ones  
tens, hundreds  
digit  
one-, two- or three-digit number  
place, place value  
stands for, represents  
exchange  
the same number as, as many as  
more, larger, bigger, greater  
fewer, smaller, less  
fewest, smallest, least  
most, biggest, largest, greatest  
one more, ten more, **one hundred more**  
one less, ten less, **one hundred less**  
equal to  
compare  
order  
size  
first, second, third ... twentieth  
twenty-first, twenty-second ...  
last, last but one  
before, after  
next  
between  
halfway between  
above, below

#### *Estimating*

guess  
how many ...?  
estimate  
nearly  
roughly  
close to  
**approximate, approximately**  
about the same as  
just over, just under

exact, exactly

too many, too few

enough, not enough

round, nearest, round to the nearest ten,  
hundred

round up, round down

## Addition and subtraction

addition

add, more, and

make, sum, total

altogether

double

near double

half, halve

one more, two more ... ten more ... one  
hundred more

how many more to make ...?

how many more is ... than ...?

how much more is ...?

subtract

take away

how many are left/left over?

how many have gone?

one less, two less, ten less ... one hundred  
less

how many fewer is ... than ...?

how much less is ...?

difference between

equals

is the same as

number bonds/pairs/facts

missing number

tens boundary, **hundreds boundary**

## Multiplication and division

multiplication

multiply

multiplied by

multiple, **factor**

groups of

times

**product**

once, twice, three times ... ten times

repeated addition

division

dividing, divide, divided by, divided into

left, left over, **remainder**

grouping

sharing, share, share equally

one each, two each, three each ... ten each

group in pairs, threes ... tens

equal groups of

doubling

halving

array

row, column

number patterns

multiplication table

multiplication fact, division fact

## Fractions

fraction

equivalent fraction

mixed number

numerator, denominator

equal part

equal grouping

equal sharing

parts of a whole

half, two halves

one of two equal parts

quarter, two quarters, three quarters

one of four equal parts

one third, two thirds

one of three equal parts

**sixths, sevenths, eighths, tenths ...**



## MEASUREMENT

measure  
 measurement  
 size  
 compare  
 measuring scale, **division**  
 guess, estimate  
 enough, not enough  
 too much, too little  
 too many, too few  
 nearly, close to, about the same as,  
**approximately**  
 roughly  
 just over, just under

### **Length**

**millimetre**, centimetre, metre, **kilometre**, **mile**  
 length, height, width, depth  
 long, short, tall  
 high, low  
 wide, narrow  
 thick, thin  
 longer, shorter, taller, higher ... and so on  
 longest, shortest, tallest, highest ... and so on  
 far, further, furthest, near, close  
**distance apart ... between ... to ... from**  
**perimeter**  
 ruler  
 metre stick, tape measure

### **Weight**

kilogram, half kilogram, gram  
 weigh, weighs, balances  
 heavy, light  
 heavier than, lighter than  
 heaviest, lightest  
 scales

### **Capacity and volume**

litre, half litre, millilitre  
 capacity  
 volume  
 full  
 empty  
 more than  
 less than  
 half full  
 quarter full  
 holds, contains  
 container

### **Temperature**

temperature  
 degree  
**centigrade**

### **Time**

time  
 days of the week, Monday, Tuesday ...  
 months of the year (January, February ...)  
 seasons: spring, summer, autumn, winter  
 day, week, weekend, fortnight, month, year,  
**century**  
 birthday, holiday  
 morning, afternoon, evening, night  
 bedtime, dinner time, playtime  
 today, yesterday, tomorrow  
 before, after  
 earlier, later  
 next, first, last  
 midnight  
**calendar**, date  
 now, soon, early, late, **earliest**, **latest**  
 quick, quicker, quickest, quickly  
 slow, slower, slowest, slowly  
 old, older, oldest  
 new, newer, newest

takes longer, takes less time  
 how long ago?  
 how long will it be to ...?  
 how long will it take to ...?  
 how often?  
 always, never, often, sometimes  
 usually  
 once, twice  
 hour, o'clock, half past, quarter past, quarter to  
 5, 10, 15 ... minutes past  
 a.m., p.m.  
 clock, clock face, watch, hands  
 digital/analogue clock/watch, timer  
 hour hand, minute hand  
 hours, minutes, seconds  
 Roman numerals  
 12-hour clock time, 24-hour clock time

### Money

money  
 coin  
 penny, pence, pound  
 price, cost  
 buy, bought, sell, sold  
 spend, spent  
 pay  
 change  
 dear, costs more  
 cheap, costs less, cheaper  
 costs the same as  
 how much ...?  
 how many ...?  
 total

## GEOMETRY

### Properties of shape

shape, pattern

flat  
 curved, straight  
 round  
 hollow, solid  
 sort  
 make, build, draw  
 perimeter  
 surface  
 size  
 bigger, larger, smaller  
 symmetry, symmetrical, symmetrical pattern  
 line symmetry  
 pattern, repeating pattern  
 match

### 2-D shape

corner, side  
 point, pointed  
 rectangle (including square), rectangular  
 circle, circular  
 triangle, triangular  
 pentagon, pentagonal  
 hexagon, hexagonal  
 octagon, octagonal  
 quadrilateral  
 right-angled  
 parallel, perpendicular

### 3-D shape

face, edge, vertex, vertices  
 cube, cuboid  
 pyramid  
 sphere, hemisphere  
 cone  
 cylinder  
 prism, triangular prism

### Position and direction

position

over, under, underneath  
 above, below  
 top, bottom, side  
 on, in  
 outside, inside  
 around  
 in front, behind  
 front, back  
 beside, next to  
 opposite  
 apart  
 between  
 middle, edge  
 centre  
 corner  
 direction  
 journey, route  
 left, right  
 up, down  
 higher, lower  
 forwards, backwards, sideways  
 across  
 next to, close, near, far  
 along  
 through  
 to, from, towards, away from  
 clockwise, anticlockwise  
 compass point  
 north, south, east, west, N, S, E, W  
 horizontal, vertical, diagonal  
 movement  
 slide  
 roll  
 turn  
 stretch, bend  
 whole turn, half turn, quarter turn,  
 three-quarter turn  
 angle ... is a greater/smaller angle than  
 right angle

acute angle  
 obtuse angle  
 straight line

## STATISTICS

count, tally, sort, vote  
 graph, block graph, pictogram  
 represent  
 group, set  
 list, table, chart, bar chart, frequency table  
 Carroll diagram, Venn diagram  
 label, title, axis, axes  
 diagram  
 most popular, most common  
 least popular, least common

## GENERAL

pattern  
 puzzle  
 problem, problem-solving  
 mental, mentally  
 what could we try next?  
 how did you work it out?  
 show how you ...  
 explain your thinking  
 explain your method  
 describe the pattern  
 describe the rule  
 investigate  
 recognise  
 describe  
 draw  
 compare  
 sort  
 greatest value, least value  
 mental calculation  
 written calculation  
 statement

# YEAR 4

## NUMBER

### Number and place value

#### *Number*

number  
numeral  
zero  
one, two, three ... twenty  
teens numbers, eleven, twelve ... twenty  
twenty-one, twenty-two ... one hundred, two hundred ... one thousand ... **ten thousand, hundred thousand, million**  
none  
how many ...?  
count, count (up) to, count on (from, to), count back (from, to)  
forwards  
backwards  
count in ones, twos, fives, tens, threes, fours, eights, fifties, **sixes, sevens, nines, twenty-fives** and so on to hundreds, thousands  
equal to  
equivalent to  
is the same as  
more, less  
most, least  
tally  
many  
odd, even  
multiple of, factor of  
sequence  
continue  
predict  
few  
pattern  
pair, rule  
relationship

**next, consecutive**

> greater than

< less than

Roman numerals

**integer, positive, negative**

**above/below zero, minus**

**negative numbers**

#### *Place value*

ones

tens, hundreds

digit

one-, two- or three-digit number

place, place value

stands for, represents

exchange

the same number as, as many as

more, larger, bigger, greater

fewer, smaller, less

fewest, smallest, least

most, biggest, largest, greatest

one more, ten more, one hundred more, **one thousand more**

one less, ten less, one hundred less, **one thousand less**

equal to

compare

order

size

first, second, third ... twentieth

twenty-first, twenty-second ...

last, last but on

before, after

next

between

halfway between

above, below

## **Estimating**

guess  
 how many  
 estimate  
 nearly  
 roughly  
 close to  
 approximate, approximately  
 about the same as  
 just over, just under  
 exact, exactly  
 too many, too few  
 enough, not enough  
 round, nearest, round to the nearest ten,  
 hundred, **thousand**  
 round up, round down

## **Addition and subtraction**

addition  
 add, more, and  
 make, sum, total  
 altogether  
 double  
 near double  
 half, halve  
 one more, two more... ten more... one  
 hundred more  
 how many more to make ...?  
 how many more is ... than ...?  
 how much more is ...?  
 subtract  
 take away  
 how many are left/left over?  
 how many have gone?  
 one less, two less, ten less ... one hundred  
 less  
 how many fewer is ... than ...?  
 how much less is ...?

difference between  
 equals  
 is the same as  
 number bonds/pairs/facts  
 missing number  
 tens boundary, hundreds boundary  
**inverse**

## **Multiplication and division**

multiplication  
 multiply  
 multiplied by  
 multiple, factor  
 groups of  
 times  
 product  
 once, twice, three times ... ten times  
 repeated addition  
 division  
 dividing, divide, divided by, divided into  
 left, left over, remainder  
 grouping  
 sharing, share, share equally  
 one each, two each, three each ... ten each  
 group in pairs, threes ... tens  
 equal groups of  
 doubling  
 halving  
 array  
 row, column  
 number patterns  
 multiplication table  
 multiplication fact, division fact  
**inverse**  
**square, squared**  
**cube, cubed**

## Fractions (including decimals)

fraction  
equivalent fraction  
mixed number  
numerator, denominator  
equal part  
equal grouping  
equal sharing  
parts of a whole  
half, two halves  
one of two equal parts  
quarter, two quarters, three quarters  
one of four equal parts  
one third, two thirds  
one of three equal parts  
sixths, sevenths, eighths, tenths ...  
**hundredths**  
**decimal, decimal fraction, decimal point,**  
**decimal place, decimal equivalent**  
**proportion**

## MEASUREMENT

measure  
measurement  
size  
compare  
**unit, standard unit**  
**metric unit**  
measuring scale, division  
guess, estimate  
enough, not enough  
too much, too little  
too many, too few  
nearly, close to, about the same as,  
approximately  
roughly  
just over, just under

## Length

millimetre, centimetre, metre, kilometre, mile  
length, height, width, depth, **breadth**  
long, short, tall  
high, low  
wide, narrow  
thick, thin  
longer, shorter, taller, higher ... and so on  
longest, shortest, tallest, highest ... and so  
on  
far, further, furthest, near, close  
distance apart ... between ... to ... from  
**edge, perimeter**  
**area, covers**  
**square centimetre (cm<sup>2</sup>)**  
ruler  
metre stick, tape measure

## Weight

**mass: big, bigger, small, smaller**  
**weight: heavy/light, heavier/lighter, heaviest/**  
**lightest**  
kilogram, half kilogram, gram  
weigh, weighs, balances  
heavy, light  
heavier than, lighter than  
heaviest, lightest  
scales

## Capacity and volume

litre, half litre, millilitre  
capacity  
volume  
full  
empty  
more than  
less than  
half full  
quarter full

holds, contains  
container, **measuring cylinder**

### **Temperature**

temperature  
degree  
centigrade

### **Time**

time  
days of the week, Monday, Tuesday ...  
months of the year (January, February ...)  
seasons: spring, summer, autumn, winter  
day, week, weekend, fortnight, month, year,  
**leap year**, century, **millennium**  
birthday, holiday  
morning, afternoon, evening, night  
bedtime, dinner time, playtime  
today, yesterday, tomorrow  
before, after  
earlier, later  
next, first, last  
**noon**, midnight  
calendar, date, **date of birth**  
now, soon, early, late, earliest, latest  
quick, quicker, quickest, quickly  
slow, slower, slowest, slowly  
old, older, oldest  
new, newer, newest  
takes longer, takes less time  
how long ago?  
how long will it be to ...?  
how long will it take to ...?  
how often?  
always, never, often, sometimes  
usually  
once, twice  
hour, o'clock, half past, quarter past,  
quarter to

5, 10, 15 ... minutes past  
a.m., p.m.  
clock, clock face, watch, hands  
digital/analogue clock/watch, timer  
hour hand, minute hand  
hours, minutes, seconds  
**timetable**, **arrive**, **depart**  
Roman numerals  
12-hour clock time, 24-hour clock time

### **Money**

money  
coin  
penny, pence, pound  
price, cost  
buy, bought, sell, sold  
spend, spent  
pay  
change  
dear, costs more  
cheap, costs less, cheaper  
costs the same as  
how much ...?  
how many ...?  
total

## **GEOMETRY**

### **Properties of shape**

shape, pattern  
flat, **line**  
curved, straight  
round  
hollow, solid  
sort  
make, build, **construct**, draw, **sketch**  
perimeter  
**centre**  
surface

angle, right-angled

base, square-based

size

bigger, larger, smaller

symmetry, symmetrical, symmetrical pattern

line symmetry

reflect, reflection

pattern, repeating pattern

match

regular, irregular

### **2-D shape**

2-D, two-dimensional

corner, side

point, pointed

rectangle (including square), rectangular,

oblong

rectilinear

circle, circular

triangle, triangular

equilateral triangle, isosceles triangle,  
scalene triangle

pentagon, pentagonal

hexagon, hexagonal

heptagon

octagon, octagonal

quadrilateral

parallelogram, rhombus, trapezium

polygon

right-angled

parallel, perpendicular

### **3-D shape**

3-D, three-dimensional

face, edge, vertex, vertices

cube, cuboid

pyramid

sphere, hemisphere, spherical

cone

cylinder, cylindrical

prism, triangular prism

tetrahedron, polyhedron

### **Position and direction**

position

over, under, underneath

above, below

top, bottom, side

on, in

outside, inside

around

in front, behind

front, back

beside, next to

opposite

apart

between

middle, edge

centre

corner

direction

journey, route

left, right

up, down

higher, lower

forwards, backwards, sideways

across

next to, close, near, far

along

through

to, from, towards, away from

clockwise, anticlockwise

compass point

north, south, east, west, N, S, E, W

north-east, north-west, south-east,  
south-west, NE, NW, SE, SW

horizontal, vertical, diagonal

translate, translation



movement  
slide  
roll  
turn  
stretch, bend  
whole turn, half turn, quarter turn,  
three-quarter turn  
**rotate, rotation**  
angle, is a greater/smaller angle than  
**degree**  
right angle  
acute angle  
obtuse angle  
**reflection**  
straight line  
**ruler, set square**  
**angle measurer, compass**

## STATISTICS

count, tally, sort, vote  
**survey, questionnaire, data**  
graph, block graph, pictogram  
represent  
group, set  
list, table, chart, bar chart, frequency table  
Carroll diagram, Venn diagram  
label, title, axis, axes  
diagram  
most popular, most common  
least popular, least common

## GENERAL

pattern  
puzzle  
problem, problem solving  
mental, mentally  
what could we try next?  
how did you work it out?

show how you ...  
explain your thinking  
explain your method  
describe the pattern  
describe the rule  
investigate  
recognise  
describe  
draw  
compare  
sort  
greatest value, least value  
mental calculation  
written calculation  
statement  
**justify**  
**make a statement**

## NUMBER

### Number and place value

#### *Number*

number  
numeral  
zero  
one, two, three ... twenty  
teens numbers, eleven, twelve ... twenty  
twenty-one, twenty-two ... one hundred, two hundred ... one thousand ... ten thousand, hundred thousand, million  
none  
how many ...?  
count, count (up) to, count on (from, to), count back (from, to)  
forwards  
backwards  
count in ones, twos, fives, tens, threes, fours, eights, fifties, sixes, sevens, nines, twenty-fives and so on to hundreds, thousands  
equal to  
equivalent to  
is the same as  
more, less  
most, least  
tally  
many  
odd, even  
multiple of, factor of  
**factor pair**  
sequence  
continue  
predict  
few  
pattern  
pair, rule  
relationship

next, consecutive  
> greater than  
< less than  
**≥ greater than or equal to**  
**≤ less than or equal to**  
Roman numerals  
integer, positive, negative  
above/below zero, minus  
negative numbers  
**formula**  
**divisibility**  
**square number**  
**prime number**  
**ascending/descending order**

#### *Place value*

ones  
tens, hundreds  
digit  
one-, two- or three-digit number  
place, place value  
stands for, represents  
exchange  
the same number as, as many as  
more, larger, bigger, greater  
fewer, smaller, less  
fewest, smallest, least  
most, biggest, largest, greatest  
one more, ten more, one hundred more, one thousand more  
one less, ten less, one hundred less, one thousand less  
equal to  
compare  
order  
size  
first, second, third ... twentieth  
twenty-first, twenty-second ...  
last, last but one

before, after  
next  
between  
halfway between  
above, below

### **Estimating**

guess  
how many ...?  
estimate  
nearly  
roughly  
close to  
approximate, approximately  
about the same as  
just over, just under  
exact, exactly  
too many, too few  
enough, not enough  
round, nearest, round to the nearest ten,  
hundred, thousand, **ten thousand**  
round up, round down

### **Addition and subtraction**

addition  
add, more, and  
make, sum, total  
altogether  
double  
near double  
half, halve  
one more, two more ... ten more ... one  
hundred more  
how many more to make ...?  
how many more is ... than ...?  
how much more is ...?  
subtract  
take away  
how many are left/left over?

how many have gone?  
one less, two less, ten less ... one hundred  
less  
how many fewer is ... than ...?  
how much less is ...?  
difference between  
equals  
is the same as  
number bonds/pairs/facts  
missing number  
tens boundary, hundreds boundary, **ones  
boundary, tenths boundary**  
inverse

### **Multiplication and division**

multiplication  
multiply  
multiplied by  
multiple, factor  
groups of  
times  
product  
once, twice, three times ... ten times  
repeated addition  
division  
dividing, divide, divided by, divided into  
left, left over, remainder  
grouping  
sharing, share, share equally  
one each, two each, three each ... ten each  
group in pairs, threes ... tens  
equal groups of  
doubling  
halving  
array  
row, column  
number patterns  
multiplication table  
multiplication fact, division fact

inverse  
square, squared  
cube, cubed

## Fractions (including decimals and percentages)

fraction, **proper/improper fraction**  
equivalent fraction  
mixed number  
numerator, denominator  
**equivalent, reduced to, cancel**  
equal part  
equal grouping  
equal sharing  
parts of a whole  
half, two halves  
one of two equal parts  
quarter, two quarters, three quarters  
one of four equal parts  
one third, two thirds  
one of three equal parts  
sixths, sevenths, eighths, tenths ...  
hundredths, **thousandths**  
decimal, decimal fraction, decimal point,  
decimal place, decimal equivalent  
proportion, **in every, for every**  
**percentage, per cent, %**

## MEASUREMENT

measure  
measurement  
size  
compare  
unit, standard unit  
metric unit, **imperial unit**  
measuring scale, division  
guess, estimate  
enough, not enough  
too much, too little

too many, too few  
nearly, close to, about the same as,  
approximately  
roughly  
just over, just under

## Length

millimetre, centimetre, metre, kilometre, mile  
length, height, width, depth, breadth  
long, short, tall  
high, low  
wide, narrow  
thick, thin  
longer, shorter, taller, higher ... and so on  
longest, shortest, tallest, highest ... and so on  
far, further, furthest, near, close  
distance apart ... between ... to ... from  
edge, perimeter  
area, covers  
square centimetre (cm<sup>2</sup>), **square metre (m<sup>2</sup>)**,  
**square millimetre (mm<sup>2</sup>)**  
ruler  
metre stick, tape measure

## Weight

mass: big, bigger, small, smaller  
weight: heavy/light, heavier/lighter, heaviest/  
lightest  
kilogram, half kilogram, gram  
weigh, weighs, balances  
heavy, light  
heavier than, lighter than  
heaviest, lightest  
scales

## Capacity and volume

litre, half litre, millilitre  
capacity

volume  
full  
empty  
more than  
less than  
half full  
quarter full  
holds, contains  
container, measuring cylinder  
**pint, gallon**

### **Temperature**

temperature  
degree  
centigrade

### **Time**

time  
days of the week, Monday, Tuesday ...  
months of the year (January, February ...)  
seasons: spring, summer, autumn, winter  
day, week, weekend, fortnight, month, year,  
leap year, century, millennium  
birthday, holiday  
morning, afternoon, evening, night  
bedtime, dinner time, playtime  
today, yesterday, tomorrow  
before, after  
earlier, later  
next, first, last  
noon, midnight  
calendar, date, date of birth  
now, soon, early, late, earliest, latest  
quick, quicker, quickest, quickly  
slow, slower, slowest, slowly  
old, older, oldest  
new, newer, newest  
takes longer, takes less time  
how long ago?

how long will it be to ...?  
how long will it take to ...?  
how often?  
always, never, often, sometimes  
usually  
once, twice  
hour, o'clock, half past, quarter past,  
quarter to  
5, 10, 15 ... minutes past  
a.m., p.m.  
clock, clock face, watch, hands  
digital/analogue clock/watch, timer  
hour hand, minute hand  
hours, minutes, seconds  
timetable, arrive, depart  
Roman numerals  
12-hour clock time, 24-hour clock time

### **Money**

money  
coin  
penny, pence, pound  
price, cost  
buy, bought, sell, sold  
spend, spent  
pay  
change  
dear, costs more  
cheap, costs less, cheaper  
costs the same as  
how much ...?  
how many ...?  
total  
**discount**  
**currency**

## **GEOMETRY**

### **Properties of shape**

shape, pattern

flat, line  
curved, straight  
round  
hollow, solid  
sort  
make, build, construct, draw, sketch  
perimeter  
centre, **radius, diameter**  
surface  
angle, right-angled  
**congruent**  
base, square-based  
size  
bigger, larger, smaller  
symmetry, symmetrical, symmetrical pattern  
line symmetry  
reflect, reflection  
**axis of symmetry, reflective symmetry**  
pattern, repeating pattern  
match  
regular, irregular

### **2-D shape**

2-D, two-dimensional  
corner, side  
point, pointed  
rectangle (including square), rectangular, oblong  
rectilinear  
circle, circular  
triangle, triangular  
equilateral triangle, isosceles triangle, scalene triangle  
pentagon, pentagonal  
hexagon, hexagonal  
heptagon  
octagon, octagonal  
quadrilateral  
parallelogram, rhombus, trapezium

polygon  
right -angled  
parallel, perpendicular  
**x-axis, y-axis, quadrant**

### **3-D shape**

3-D, three-dimensional  
face, edge, vertex, vertices  
cube, cuboid  
pyramid  
sphere, hemisphere, spherical  
cone  
cylinder, cylindrical  
prism, triangular prism  
tetrahedron, polyhedron  
**octahedron**

### **Position and direction**

position  
over, under, underneath  
above, below  
top, bottom, side  
on, in  
outside, inside  
around  
in front, behind  
front, back  
beside, next to  
opposite  
apart  
between  
middle, edge  
centre  
corner  
direction  
journey, route  
left, right  
up, down

higher, lower  
forwards, backwards, sideways  
across  
next to, close, near, far  
along  
through  
to, from, towards, away from  
clockwise, anticlockwise  
compass point  
north, south, east, west, N, S, E, W  
north-east, north-west, south-east,  
south-west, NE, NW, SE, SW  
horizontal, vertical, diagonal  
translate, translation

**coordinate**

movement  
slide  
roll  
turn  
stretch, bend  
whole turn, half turn, quarter turn,  
three-quarter turn  
rotate, rotation  
angle, is a greater/smaller angle than  
degree  
right angle  
acute angle  
obtuse angle  
reflection  
straight line  
ruler, set square  
angle measurer, compass, **protractor**

**STATISTICS**

count, tally, sort, vote  
survey, questionnaire, data, **database**  
graph, block graph, pictogram  
represent  
group, set

list, table, chart, bar chart, frequency table,  
**bar line chart**

Carroll diagram, Venn diagram

**line graph**

label, title, axis, axes

diagram

most popular, most common

least popular, least common

**maximum/minimum value**

**outcome**

**GENERAL**

pattern

puzzle

problem, problem solving

mental, mentally

what could we try next?

how did you work it out?

show how you ...

explain your thinking

explain your method

describe the pattern

describe the rule

investigate

recognise

describe

draw

compare

sort

greatest value, least value

mental calculation

written calculation

statement

justify

make a statement

**explain your reasoning**

# YEAR 6

## NUMBER

### Number and place value

#### *Number*

number  
numeral  
zero  
one, two, three ... twenty  
teens numbers, eleven, twelve ... twenty  
twenty-one, twenty-two ... one hundred, two  
hundred ... one thousand ... ten thousand,  
hundred thousand, million  
none  
how many ...?  
count, count (up) to, count on (from, to),  
count back (from, to)  
forwards  
backwards  
count in ones, twos, fives, tens, threes,  
fours, eights, fifties, sixes, sevens, nines,  
twenty-fives and so on to hundreds,  
thousands  
equal to  
equivalent to  
is the same as  
more, less  
most, least  
tally  
many  
odd, even  
multiple of, factor of  
factor pair  
sequence  
continue  
predict  
few  
pattern  
pair, rule  
relationship  
next, consecutive  
> greater than  
< less than

$\geq$  greater than or equal to  
 $\leq$  less than or equal to  
Roman numerals  
integer, positive, negative  
above/below zero, minus  
negative numbers  
formula  
divisibility  
square number  
prime number  
**factorise**  
**prime factor**  
ascending/descending order  
**digit total**

#### *Place value*

ones  
tens, hundreds  
digit  
one-, two- or three-digit number  
place, place value  
stands for, represents  
exchange  
the same number as, as many as  
more, larger, bigger, greater  
fewer, smaller, less  
fewest, smallest, least  
most, biggest, largest, greatest  
one more, ten more, one hundred more, one  
thousand more  
one less, ten less, one hundred less, one  
thousand less  
equal to  
compare  
order  
size  
first, second, third ... twentieth  
twenty-first, twenty-second ...  
last, last but one  
before, after  
next  
between



halfway between  
above, below

### ***Estimating***

guess  
how many ...?  
estimate  
nearly  
roughly  
close to  
approximate, approximately  
about the same as  
just over, just under  
exact, exactly  
too many, too few  
enough, not enough  
round, nearest, round to the nearest ten,  
hundred, thousand, ten thousand  
round up, round down

### **Addition and subtraction**

addition  
add, more, and  
make, sum, total  
altogether  
double  
near double  
half, halve  
one more, two more ... ten more ... one  
hundred more  
how many more to make ...?  
how many more is ... than ...?  
how much more is ...?  
subtract  
take away  
how many are left/left over?  
how many have gone?  
one less, two less, ten less ... one hundred  
less  
how many fewer is ... than ...?  
how much less is ...?

difference between  
equals  
is the same as  
number bonds/pairs/facts  
missing number  
tens boundary, hundreds boundary, ones  
boundary, tenths boundary  
inverse

### **Multiplication and division**

multiplication  
multiply  
multiplied by  
multiple, factor  
groups of  
times  
product  
once, twice, three times ... ten times  
repeated addition  
division  
dividing, divide, divided by, divided into  
left, left over, remainder  
grouping  
sharing, share, share equally  
one each, two each, three each ... ten each  
group in pairs, threes ... tens  
equal groups of  
doubling  
halving  
array  
row, column  
number patterns  
multiplication table  
multiplication fact, division fact  
inverse  
square, squared  
cube, cubed

### **Fractions (including decimals, percentages, ratio and proportion)**

fraction, proper/improper fraction

equivalent fraction  
mixed number  
numerator, denominator  
equivalent, reduced to, cancel  
equal part  
equal grouping  
equal sharing  
parts of a whole  
half, two halves  
one of two equal parts  
quarter, two quarters, three quarters  
one of four equal parts  
one third, two thirds  
one of three equal parts  
sixths, sevenths, eighths, tenths ...  
hundredths, thousandths  
decimal, decimal fraction, decimal point,  
decimal place, decimal equivalent  
proportion, in every, for every  
**ratio**  
percentage, per cent, %

## Algebra

formula, **formulae**  
**equation**  
**unknown**  
**variable**

## MEASUREMENT

measure  
measurement  
size  
compare  
unit, standard unit  
metric unit, imperial unit  
measuring scale, division  
guess, estimate  
enough, not enough  
too much, too little  
too many, too few  
nearly, close to, about the same as,

approximately  
roughly  
just over, just under

## Length

centimetre, metre, millimetre, kilometre,  
mile, **yard, foot, feet, inch, inches**  
length, height, width, depth, breadth  
long, short, tall  
high, low  
wide, narrow  
thick, thin  
longer, shorter, taller, higher ... and so on  
longest, shortest, tallest, highest ... and so  
on  
far, further, furthest, near, close  
distance apart ... between ... to ... from  
edge, perimeter, **circumference**  
area, covers  
square centimetre (cm<sup>2</sup>), square metre (m<sup>2</sup>),  
square millimetre (mm<sup>2</sup>)  
ruler  
metre stick, tape measure

## Weight

mass: big, bigger, small, smaller  
weight: heavy/light, heavier/lighter, heaviest/  
lightest  
**tonne**, kilogram, half kilogram, gram, **pound**,  
**ounce**  
weigh, weighs, balances  
heavy, light  
heavier than, lighter than  
heaviest, lightest  
scales

## Capacity and volume

litre, half litre, millilitre, **centilitre**  
**cubic centimetres (cm<sup>3</sup>)**, **cubic metres (m<sup>3</sup>)**,  
**cubic millimetres (mm<sup>3</sup>)**, **cubic kilometres**  
**(km<sup>3</sup>)**  
capacity  
volume

full  
empty  
more than  
less than  
half full  
quarter full  
holds, contains  
container, measuring cylinder  
pint, gallon

### **Temperature**

temperature  
degree  
centigrade

### **Time**

time  
days of the week, Monday, Tuesday ...  
months of the year (January, February ...)  
seasons: spring, summer, autumn, winter  
day, week, weekend, fortnight, month, year,  
leap year, century, millennium  
birthday, holiday  
morning, afternoon, evening, night  
bedtime, dinner time, playtime  
today, yesterday, tomorrow  
before, after  
earlier, later  
next, first, last  
noon, midnight  
calendar, date, date of birth  
now, soon, early, late, earliest, latest  
quick, quicker, quickest, quickly  
slow, slower, slowest, slowly  
old, older, oldest  
new, newer, newest  
takes longer, takes less time  
how long ago?  
how long will it be to ...?  
how long will it take to ...?

how often?  
always, never, often, sometimes  
usually  
once, twice  
hour, o'clock, half past, quarter past,  
quarter to  
5, 10, 15 ... minutes past  
a.m., p.m.  
clock, clock face, watch, hands  
digital/analogue clock/watch, timer  
hour hand, minute hand  
hours, minutes, seconds  
timetable, arrive, depart  
Roman numerals  
12-hour clock time, 24-hour clock time  
**Greenwich Mean Time, British Summer  
Time, International Date Line**

### **Money**

money  
coin  
penny, pence, pound  
price, cost  
buy, bought, sell, sold  
spend, spent  
pay  
change  
dear, costs more  
cheap, costs less, cheaper  
costs the same as  
how much ...?  
how many ...?  
total  
discount  
currency  
**profit, loss**

## **GEOMETRY**

### **Properties of shape**

shape, pattern  
flat, line

curved, straight  
round  
hollow, solid  
sort  
make, build, construct, draw, sketch  
perimeter  
centre, radius, diameter  
circumference, concentric, arc  
net, open, closed  
surface  
angle, right-angled  
congruent  
intersecting, intersection  
plane  
base, square-based  
size  
bigger, larger, smaller  
symmetry, symmetrical, symmetrical pattern  
line symmetry  
reflect, reflection  
axis of symmetry, reflective symmetry  
pattern, repeating pattern  
match  
regular, irregular

### **2-D shape**

2-D, two-dimensional  
corner, side  
point, pointed  
rectangle (including square), rectangular, oblong  
rectilinear  
circle, circular  
triangle, triangular  
equilateral triangle, isosceles triangle, scalene triangle  
pentagon, pentagonal  
hexagon, hexagonal  
heptagon  
octagon, octagonal  
quadrilateral

parallelogram, rhombus, trapezium, kite  
polygon  
right-angled  
parallel, perpendicular  
x-axis, y-axis, quadrant

### **3-D shape**

3-D, three-dimensional  
face, edge, vertex, vertices  
cube, cuboid  
pyramid  
sphere, hemisphere, spherical  
cone  
cylinder, cylindrical  
prism, triangular prism  
tetrahedron, polyhedron  
octahedron  
dodecahedron  
net, open, closed

### **Position and direction**

position  
over, under, underneath  
above, below  
top, bottom, side  
on, in  
outside, inside  
around  
in front, behind  
front, back  
beside, next to  
opposite  
apart  
between  
middle, edge  
centre  
corner  
direction  
journey, route  
left, right  
up, down

higher, lower  
forwards, backwards, sideways  
across  
next to, close, near, far  
along  
through  
to, from, towards, away from  
clockwise, anticlockwise  
compass point  
north, south, east, west, N, S, E, W  
north-east, north-west, south-east,  
south-west, NE, NW, SE, SW  
horizontal, vertical, diagonal  
translate, translation  
coordinate  
movement  
slide  
roll  
turn  
stretch, bend  
whole turn, half turn, quarter turn,  
three-quarter turn  
rotate, rotation  
angle, is a greater/smaller angle than  
degree  
right angle  
acute angle  
obtuse angle  
**reflex angle**  
reflection  
straight line  
ruler, set square  
angle measurer, compass, protractor

## STATISTICS

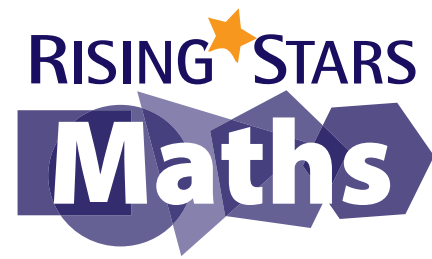
count, tally, sort, vote  
survey, questionnaire, data, database  
graph, block graph, pictogram  
represent  
group, set

list, table, chart, bar chart, frequency table,  
bar line chart  
Carroll diagram, Venn diagram  
line graph  
**pie chart**  
label, title, axis, axes  
diagram  
most popular, most common  
least popular, least common  
maximum/minimum value  
outcome  
**mean (mode, median, range as estimates  
for this)**  
**statistics, distribution**

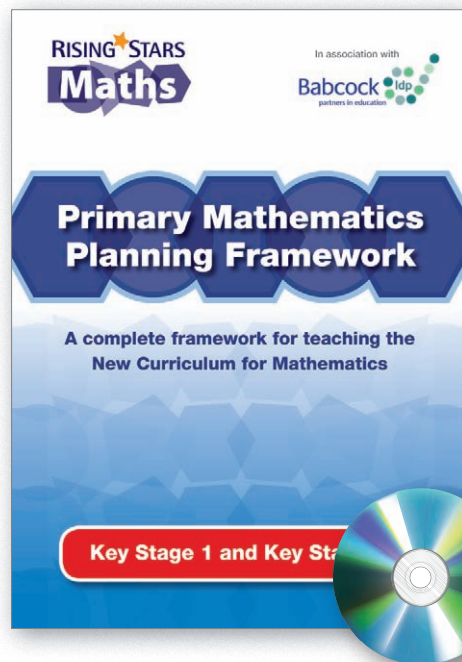
## GENERAL

pattern  
puzzle  
problem, problem solving  
mental, mentally  
what could we try next?  
how did you work it out?  
show how you ...  
explain your thinking  
explain your method  
describe the pattern  
describe the rule  
investigate  
recognise  
describe  
draw  
compare  
sort  
greatest value, least value  
mental calculation  
written calculation  
statement  
justify  
make a statement  
explain your reasoning

# Also available from Primary Mathematics Planning Framework



Comprehensive medium-term planning and assessment  
for the new National Curriculum for Primary Mathematics

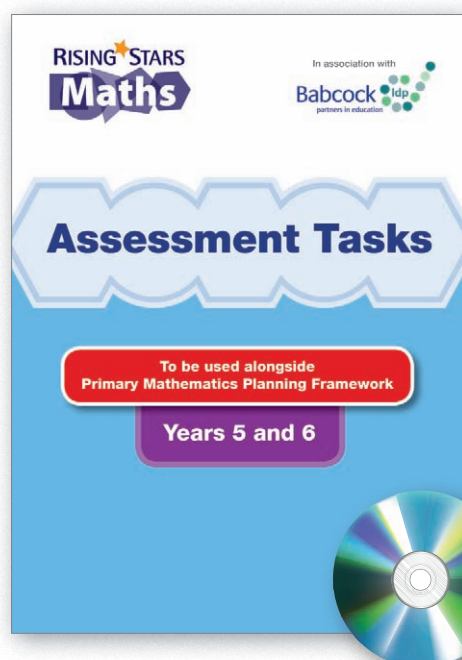


Rising Stars has teamed up with Babcock Learning and Development Partnership (Devon Local Authority), one of the UK's leading school improvement services, to develop a fully planned framework that will help you to deliver the new curriculum with ease and make rich connections across mathematical ideas.

- **Time-saving** – takes all of the effort out of planning for the new curriculum
- **Flexible** – schools can easily edit the pathways to suit their requirements
- **Supportive** – gives schools the confidence to deliver the New Curriculum for Mathematics
- **Cost-effective** – helps schools make the most of existing resources and identify gaps in teacher knowledge



## Assessment Tasks

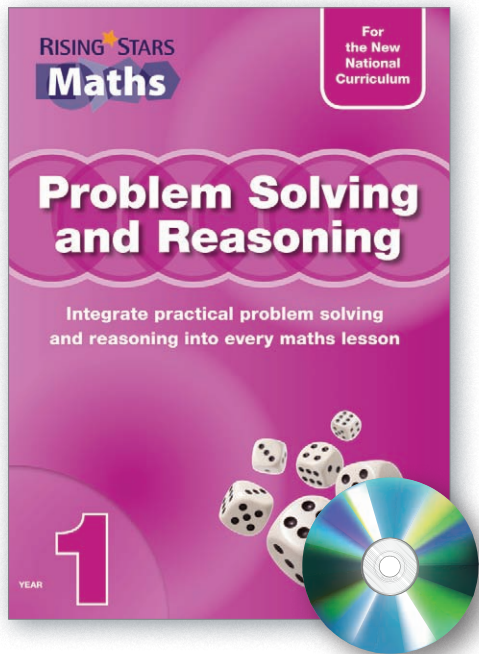
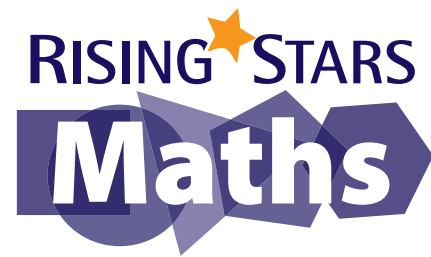


New assessment tasks to support you in assessing pupils' understanding of each objective in the new primary maths curriculum. Three photocopiable books provide 14 assessment tasks for each year linked to the success criteria in each sequence of the Primary Mathematics Planning Framework.

- Designed to be used at the end of the teaching sequence
- Enables identification of those children who have either mastered the content in the sequence or who are still working towards it and need further support
- Includes 'look out for children who ...' guidance to support teachers with early identification of problems with conceptual understanding and remediation
- All assessment tasks are provided in print and on an editable CD-ROM for flexible use across year groups

# Also available from

## Problem Solving and Reasoning



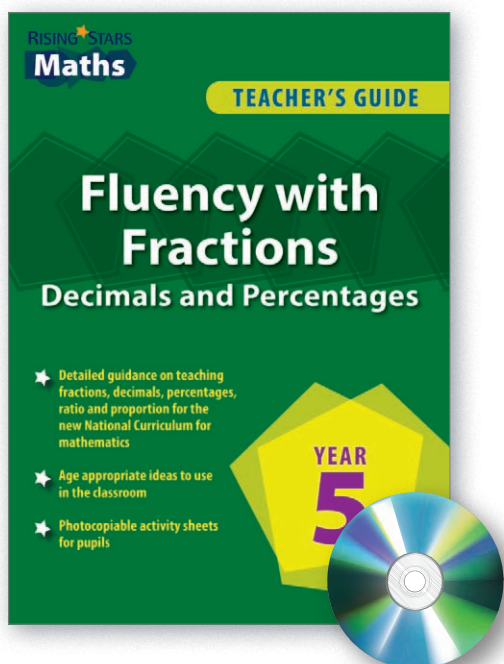
With the renewed emphasis within the new maths curriculum on problem solving and reasoning, this brand new resource will support schools in integrating practical problem solving into their day-to-day teaching.

- Effective strategies and techniques to develop skills across the curriculum
- Key strategies provide practical ideas and questions to embed problem solving and reasoning in every maths lesson
- Each pack includes a bank of investigative activities for pupils to apply their reasoning skills
- Can be used to supplement any existing maths resource

**'A fantastic resource to help teachers plan and deliver great lessons involving problem solving and reasoning'**

Caroline Clissold, Coordinator for the National Centre for Excellence in the Teaching of Mathematics (NCETM)

## Fluency with Fractions

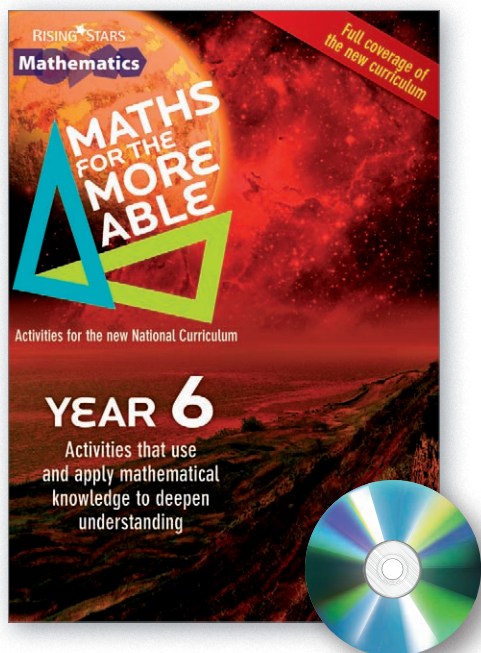
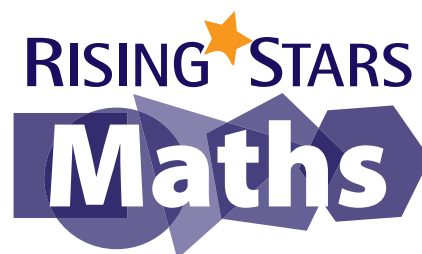


Differentiated activities to promote conceptual understanding and number fluency

- Full coverage of the National Curriculum content
- Easy-to-follow guidance includes clear NC links, prior knowledge requirements and helpful subject knowledge to boost confidence for non-specialists and teaching assistants
- Differentiated activities ensure challenging content can be accessed by all abilities
- References to a wide variety of visual models and images contextualises learning for pupils and helps develop number fluency

CD-ROMs contain editable versions of all the activities

# Also available from Maths for the More Able

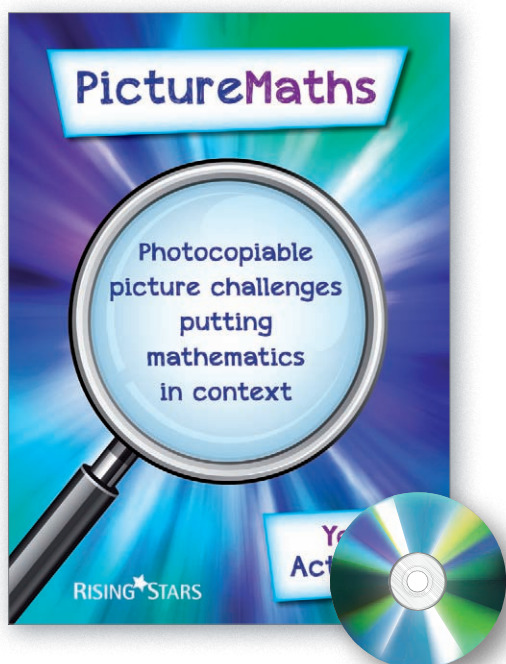


Developed for the new National Curriculum, *Maths for the More Able* is a bank of challenging, space-themed problem-solving activities designed to engage and stretch pupils

- Engage and excite pupils using challenging, space-themed problem-solving activities
- Gain the confidence to stretch your more able pupils in mathematics
- Adapt and edit activities and create your own resources
- Give pupils the opportunity to explore and apply National Curriculum maths content

Published in association with **nace**

## Picture Maths



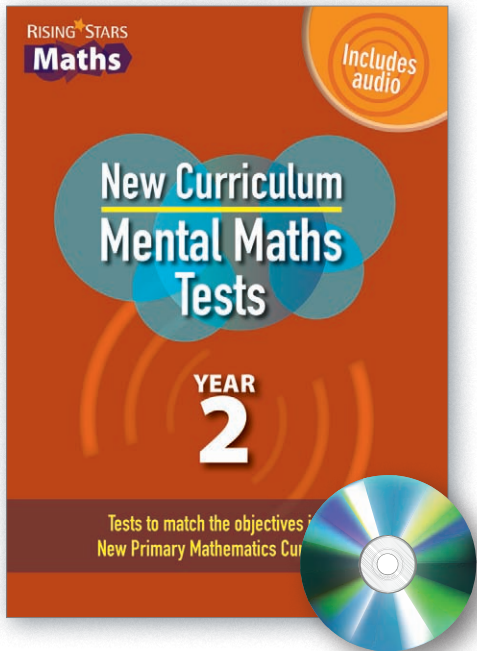
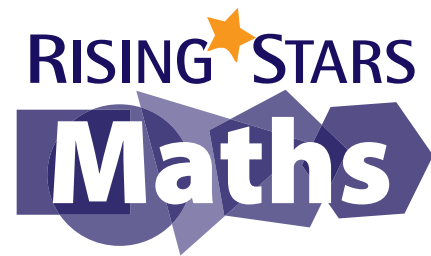
*Picture Maths* offers a new approach to teaching mathematical problem-solving that will help engage and raise the attainment of visual and reluctant learners using picture-based activities. The tasks develop a deeper level of understanding by putting maths problems into real-life contexts, making maths relevant.

- Teaching ideas to introduce topics in a real-life context
- Photocopiable pupil worksheets using pictures to solve mathematical problems
- Extension and homework activities to challenge and extend learning





# Also available from New Curriculum Mental Maths Tests



Fully matched to the new National Curriculum, these brand new packs provide regular, weekly mental maths practice that support children in improving their ability to answer mental maths questions.

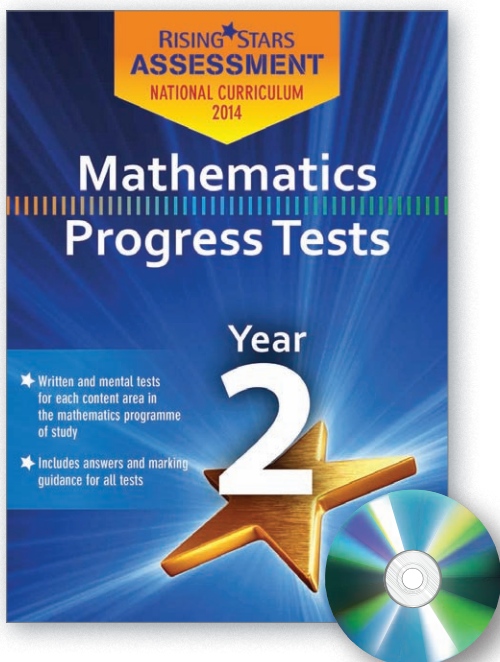
- Weekly tests provide regular mental maths practice
- Written to match the objectives of the new National Curriculum
- Everything you need to ensure your pupils are prepared for the mental maths element of the KS2 National Tests



**'This is exactly what I have been looking for!  
There is nothing else like this available.'**

Maggie Brooks, KS2 Coordinator, Royston Primary School

# Mathematics Progress Tests



A whole-school approach to support you in assessing mathematics for the new primary curriculum.

- Easily identify strengths and weaknesses to inform teaching
- Assess pupils' learning and demonstrate progress to Ofsted
- CD-ROM includes a unique Progress Tracker to monitor and report on individuals and classes
- Track how pupils are progressing against the topic and their year group
- Supports assessment without levels

Series Adviser



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