RISING STARS Maths

For the 2014 National Curriculum

Mathematical Vocabulary

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

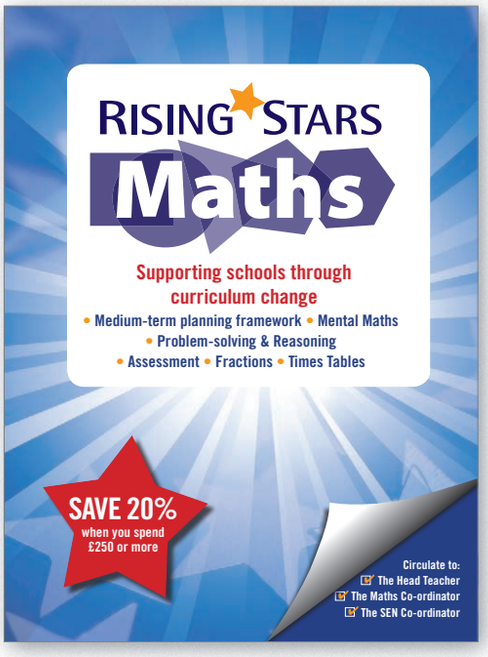
- Indispensable checklists for each year group
- Guidance on the importance of spoken language
- Organised to support the raised expectations of the 2014 Programme of Study

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



Visit the Rising Stars website to download our Maths Catalogue and find out more about how our maths resources will suit your needs.

For more information or to place an order contact us at:

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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

Did you know?

You can now find fun maths challenges for your class at 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 ...?*

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

YEAR 1

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

YEAR 2

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

YEAR 2

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 …

YEAR 3

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

YEAR 3

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

YEAR 4

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^2)
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

YEAR 4

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

YEAR 4

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

YEAR 4

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

YEAR 4

YEAR 5

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

YEAR 5

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^2), square metre (m^2), square millimetre (mm^2)

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

YEAR 5

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

YEAR 5

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 5

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
≥ 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
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^2), square metre (m^2), square millimetre (mm^2)
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^3), cubic metres (m^3), cubic millimetres (mm^3), cubic kilometres (km^3)
capacity
volume

YEAR 6

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

YEAR 6

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

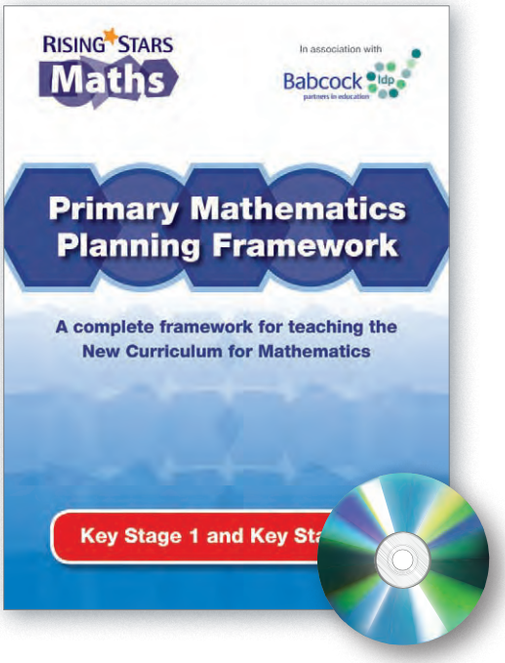
pattern
puzzle
problem, problem solving
mental, mentally
what could we try next?
how did you work it out?
show how you …
explain your thinking
explain your method
describe the pattern
describe the rule
investigate
recognise
describe
draw
compare
sort
greatest value, least value
mental calculation
written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

YEAR 6

Also available from

Primary Mathematics Planning Framework

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

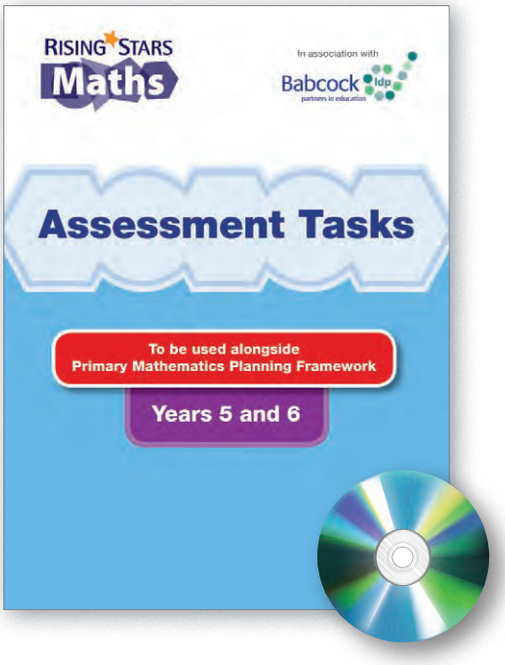


Rising Stars has teamed up with Babcock Learning and Development Partnership (Devon Local Authority), one of the UK's leading school improvement services, to develop a fully planned framework that will help you to deliver the new curriculum with ease and make rich connections across mathematical ideas.

- **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

Can both be used alongside any mathematics resources you have in school

Assessment Tasks



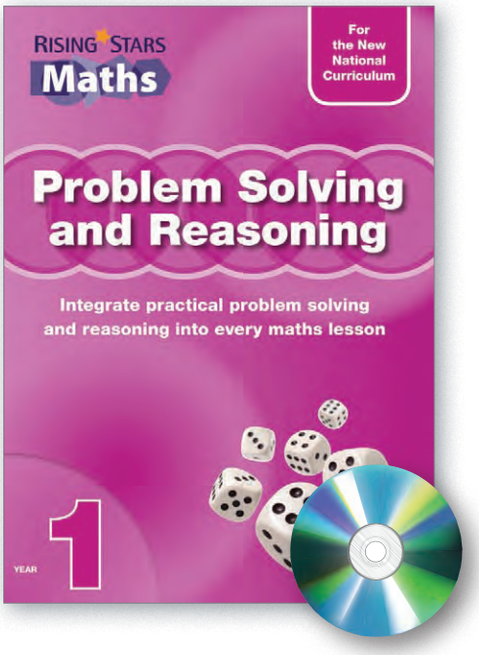
New assessment tasks to support you in assessing pupils' understanding of each objective in the new primary maths curriculum. Three photocopiable books provide 14 assessment tasks for each year linked to the success criteria in each sequence of the Primary Mathematics Planning Framework.

- 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

RISING STARS Maths

Problem Solving and Reasoning



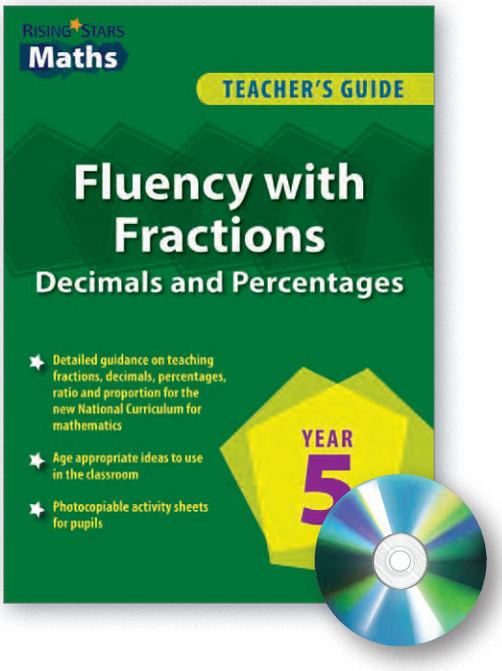
With the renewed emphasis within the new maths curriculum on problem solving and reasoning, this brand new resource will support schools in integrating practical problem solving into their day-to-day teaching.

- 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



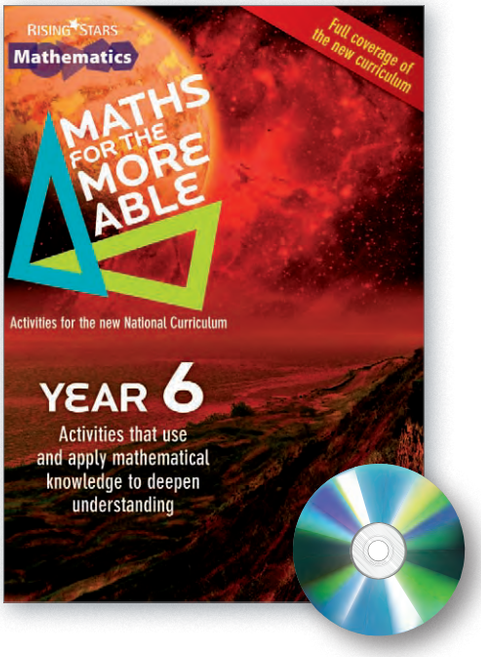
Differentiated activities to promote conceptual understanding and number fluency

- 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

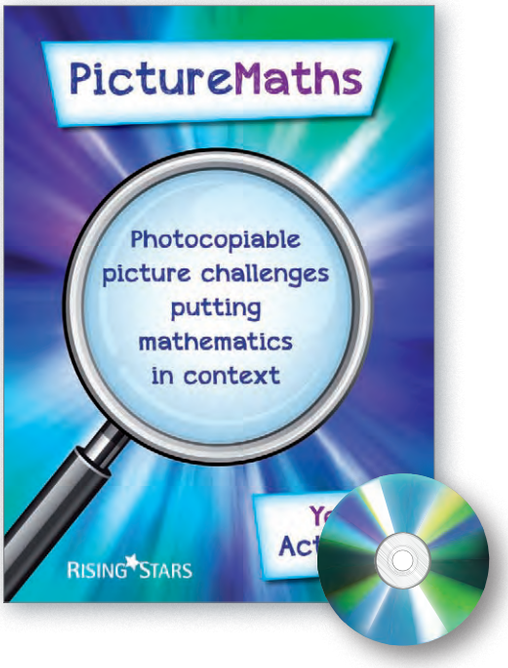


Developed for the new National Curriculum, *Maths for the More Able* is a bank of challenging, space-themed problem-solving activities designed to engage and stretch pupils

- 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



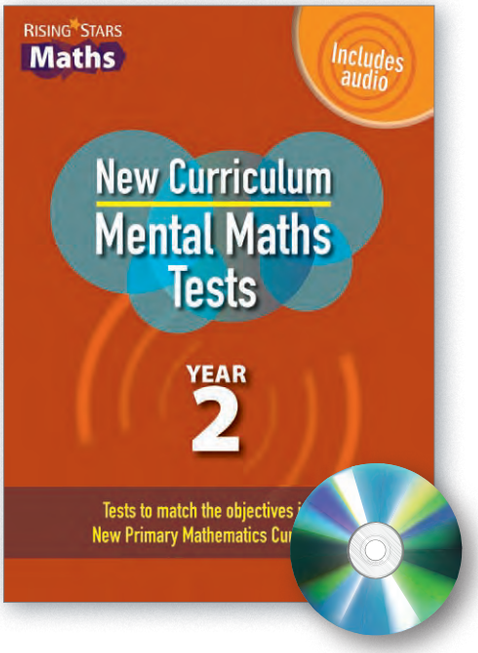
Picture Maths offers a new approach to teaching mathematical problem-solving that will help engage and raise the attainment of visual and reluctant learners using picture-based activities. The tasks develop a deeper level of understanding by putting maths problems into real-life contexts, making maths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

Ideal for Pupil Premium

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.

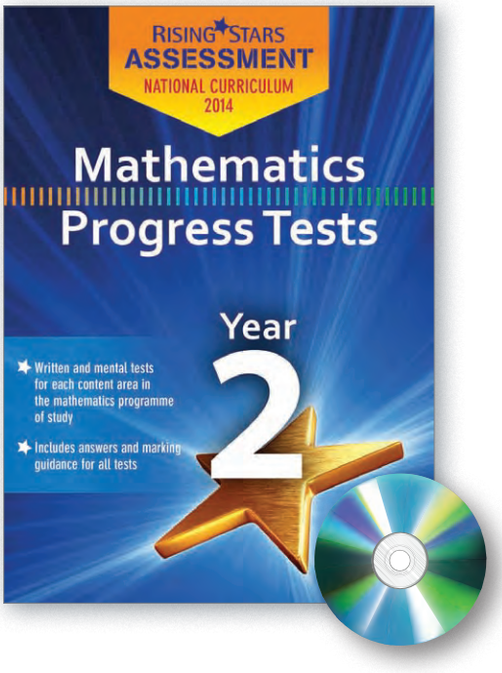
- Weekly tests provide regular mental maths practice
- Written to match the objectives of the new National Curriculum
- Everything you need to ensure your pupils are prepared for the mental maths element of the KS2 National Tests

Includes audio tests for Years 1-6

'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

CORNWALL LEARNING

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