The National Strategies
Primary

Overcoming barriers in mathematics – helping children move from level 1 to level 2

Review and assess
Teach
Learning and teaching
Apply
Practise

department for
children, schools and families

Minimum specification		
	PC	Mac
CPU	Pentium III or greater	PowerPC G4 (867MHz or faster)
RAM	128 MB	512 MB
Hard drive	100 MB space	100 MB space
CD drive	24 x speed	24 x speed
SVGA graphics card	16 bit colour	16 bit colour
Minimum screen resolution	800 x 600	800 x 600
Sound card, speakers, or headphones	16 bit	Standard
Keyboard and mouse	Yes (Microsoft compatible)	Yes
Operating system	Windows 2000 or later	Mac OS X or later

Instructions for running the CD-ROM

Insert the CD-ROM into your CD-ROM tray. Your computer may automatically run the program if you have a feature called **Auto run** enabled. If it does not automatically run, follow the following steps.

- For PC users, double click on My Computer to open it, and then double click on the CD-ROM icon to open the CD-ROM.

- For Mac users, double click on the CD-ROM icon on your desktop to open the CD-ROM.

- Double click on the file '**index.html**'.

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Please check all website references carefully to see if they have changed and substitute other references where appropriate.

Contents

Introduction

Welcome to this CD-ROM-based resource. The materials are designed to help you ensure that, in mathematics, Year 1 and Year 2 children progress from level 1 to level 2 by the end of Year 2. Although many children achieve a secure level 2 by the end of Year 2, some children still meet barriers in their learning that slow or block their progress. The materials on the CD-ROM provide teaching resources and ideas upon which you can draw when planning additional support for those children. This CD-ROM is one of a set of focused intervention materials that are being developed for mathematics. Materials to support moving children from level 2 to level 3 and from level 3 to level 4 are already available (Refs: 00149-2008PCK-EN and 00695-2007PCK-EN). We hope that you will find these materials useful when planning your teaching to help children working around the level 1 to level 2 border make good progress.

What mathematics appears on the CD-ROM?

The materials address key areas of mathematics that Year 1 and Year 2 children working at the border of level 1 and level 2 often find challenging. While the CD-ROM includes all the Year 1 and Year 2 learning objectives for mathematics, not all these objectives have materials to support them, only those that have been identified as the most common barriers to progress.

How were the areas of mathematics identified?

The decision about which areas of mathematics to include on the CD-ROM was informed by a scrutiny of the performance of children whose attainment was just below or only just above the level 1 to 2 boundary at the end of Key Stage One. This analysis was further supported by evidence from QCA reports, research evidence and feedback from teachers and consultants. This evidence pointed to a number of common barriers in mathematics that often prevent children from making progress. These are the areas of mathematics that appear on the CD-ROM – the areas of mathematics children find difficult to learn, which are often the areas that are more difficult to teach.

How do I access the materials?

The materials on the CD-ROM are accessed through the learning objectives for mathematics as set out in the Primary Framework. The objectives are organised into the seven strands of the Framework to help you match them to the Unit of work you might be teaching. At the back of this booklet there is a sequence of charts. The charts make links between level descriptions, common barriers to progress, the associated Year 1 and Year 2 objectives, and materials on the CD-ROM, with reference to the Blocks and Units in the Primary Framework. This provides a see-at-a-glance guide to support you in identifying key barriers in moving children from level 1 to level 2 and pinpointing where children are having difficulties and how to move them on. The CD-ROM draws on existing materials, some of which can be found in the Primary Framework, and provides extra support and guidance on teaching approaches designed to support children in overcoming identified barriers to progress.

Who are these materials aimed at?

The materials are designed to be used flexibly and as appropriate for your planning and teaching context. There are aspects that require intervention by you, as the teacher, drawing on your knowledge of children's progress in mathematics; for example, when using the 'Can I…?' prompts and review questions to pinpoint barriers to progress. After the barriers to learning have been identified, other elements might be used by a teaching assistant or by additional adults to support learning, or might provide a focus for targeted booster support. These materials could be used with an individual child or with a group of children who share similar barriers to progress.

The materials are designed to be used with children who are at risk of not making the necessary progress to move from level 1 to secure level 2 and therefore not meeting age-related expectations by the end of Year 2.

How do the materials link to the Primary Framework?

The structure of the CD-ROM follows that of the Primary Framework, with the strands and objectives providing the way into the 'Can I…?' questions and related teaching materials and resources. The grids at the end of this booklet show how these objectives fit into the Blocks and Units structure of the Framework, where further materials including 'I can…' targets and assessment for learning (AfL) prompts can be found. The Assessment section of the Framework will help you to identify areas of mathematics that require additional focus with children working at the level 1 to level 2 border, and the materials on this CD-ROM could then be used to help address these areas.
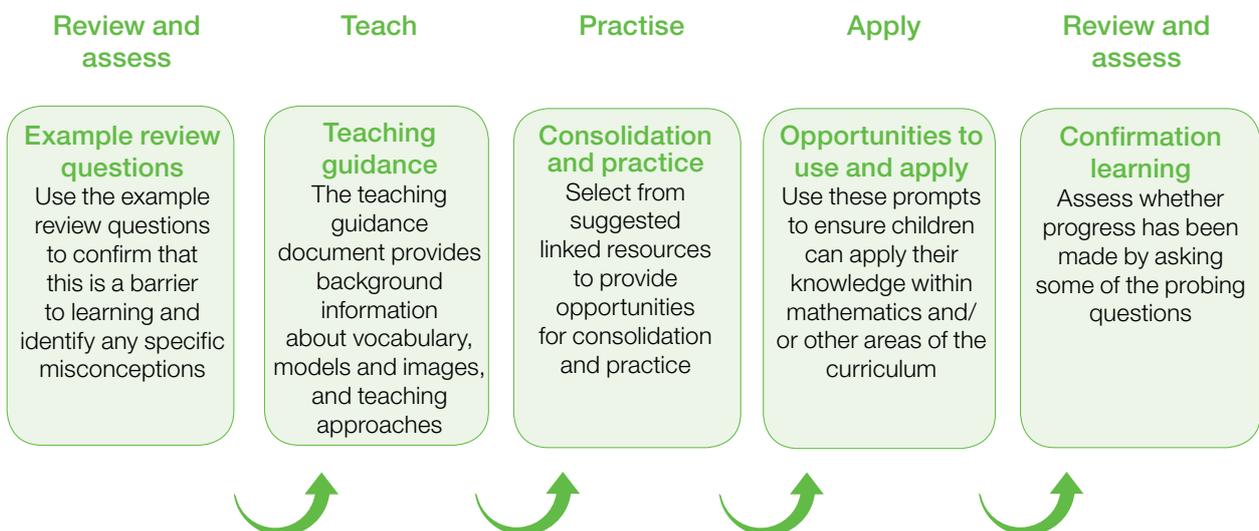
How are the CD-ROM materials structured?

The entry point to access the materials has been aligned to six of the seven strands of mathematics used in the Primary Framework. The *Using and applying mathematics* strand is embedded in the materials rather than identified as a separate set of 'Can I…?' questions. The aim of this is to place the use and application of mathematics at the heart of the teaching and learning cycle to ensure that children have sufficient opportunity to apply their learning – and that the learning is sufficiently secure to enable them to use their mathematics in new contexts and make connections across their learning.

The materials on the CD-ROM support the cycle that underpins the Primary Framework: review and assess–teach–practise–apply–review and assess. Each stage is supported by prompts and linked materials.

The cycle is set out in more detail below to show how it informs the structure of the materials on the CD-ROM.

Review and assess	Teach	Practise	Apply	Review and assess
Example review questions Use the example review questions to confirm that this is a barrier to learning and identify any specific misconceptions	**Teaching guidance** The teaching guidance document provides background information about vocabulary, models and images, and teaching approaches	**Consolidation and practice** Select from suggested linked resources to provide opportunities for consolidation and practice	**Opportunities to use and apply** Use these prompts to ensure children can apply their knowledge within mathematics and/ or other areas of the curriculum	**Confirmation learning** Assess whether progress has been made by asking some of the probing questions

How should I use the materials on the CD-ROM?

The first step in using the CD-ROM is to carry out an assessment of the children's learning to identify where support is needed. The Assessment section of the Primary Framework provides materials to support you in this. Select the objective linked to an identified barrier to learning for an individual or group of children. Then select the relevant 'Can I…?' question linked to this barrier. The tables on the next few pages explain the structure of screens on the CD-ROM and the linked resources.

Contents of the CD-ROM

From your tracking of children's progress and ongoing assessment you will have identified potential barriers to learning. The **Example review questions** provide support for confirming that this area is a barrier to learning for children and identifying any specific misconceptions.

The questions might be used as starting points for discussion with small groups or individuals.

Depending upon the area of mathematics, the questions include suggestions for closed and open-ended questions, and questions requiring reasoning and discussion.
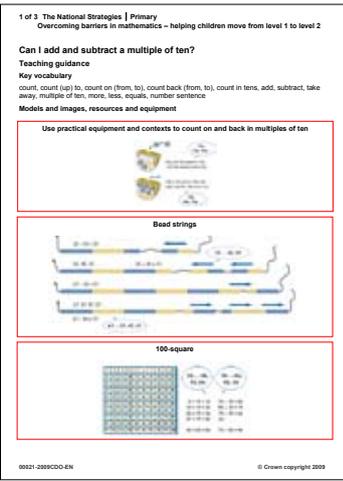
The **Teaching guidance** provides background information about appropriate vocabulary, models and images, resources and equipment and teaching approaches. The list of vocabulary is a useful reference point for key vocabulary that children need to be able to use and explain. The models, images and practical materials are drawn from a variety of sources, including the former models and images charts and interactive teaching programs, and often include some suggestions for their use. The *Teaching tips* section provides a few starting points for tackling the area of mathematics with children, ways of linking concepts with other areas of the curriculum, or ways of overcoming misconceptions.

The **Consolidation and practice** pages provide links to a variety of existing resources that can be used by children in guided or independent work.

The ICT resources include interactive teaching programs (ITPs) and spreadsheets. Where the ITP guide symbol appears, this links to a guidance document to support the use of ITPs.

Further ITPs can be found in the library of the Framework website at www.standards.dcsf.gov.uk/nationalstrategies/node/85164

Also linked to these pages are relevant materials from the *Supporting children with gaps in their mathematical understanding (Wave 3)* resource. In line with the Primary Framework, these materials have been linked where they could help children to overcome barriers to progress in a specific area of mathematics.

The **Opportunities to use and apply** pages provide suggestions for how children might make use of a specific area of mathematics. This includes three key areas: applying understanding in a reasoning context, for example investigating a general statement; applying in other areas of mathematics, for example using the ability to locate numbers on a number line to read scales in measures; and, finally, using and applying mathematics across the curriculum and in out-of-school contexts.

The **Confirming learning** section for each 'Can I…?' question provides questions, prompts and activities to probe children's understanding. These can be adapted to be used as assessment activities for individuals or small groups in order to assess whether progress has been made in this area of mathematics.

What is available to help me build the materials into my planning?

On the next few pages is a set of see-at-a-glance charts to help you to carry out your assessments and to plan appropriate learning and teaching. The level 1 and level 2 descriptions for the *Number and algebra*, *Shape, space and measures* and *Handling data* attainment targets are listed, together with the difficulties that the range of analyses has identified as most common in limiting children's progress from level 1 to level 2. After the level descriptions for each attainment target are charts with the learning objectives for Years 1 and 2 taken from the relevant strands that can be used to inform your planning. These have the appropriate 'Can I…?' questions that appear on the CD-ROM aligned to the objectives. The 'Can I…?' questions might be shared with children as part of the assessment process, inviting them to identify the mathematics they can do in the context of the question and what they still find difficult. They might also be turned into 'I can…' statements to generate curricular targets, using the materials on the CD-ROM and the Primary Framework to draw together success criteria to share and discuss with children. The final set of charts indicates where each of the objectives for Years 1 and 2 appear in the Blocks and Units structure of the Primary Framework.

Attainment target 2: Number and algebra

Level 1	Level 2	Commonly-encountered difficulties
Pupils count, order, add and subtract numbers when solving problems involving up to 10 objects. They read and write the numbers involved.	Pupils count sets of objects reliably, and use mental recall of addition and subtraction facts to 10. They begin to understand the place value of each digit in a number and use this to order numbers up to 100. They choose the appropriate operation when solving addition and subtraction problems. They use the knowledge that subtraction is the inverse of addition. They use mental calculation strategies to solve number problems involving money and measures. They recognise sequences of numbers, including odd and even numbers.	Understanding place value of numbers up to 100

Rounding numbers to the nearest 10

Ordering two-digit numbers and positioning them on a number line

Describing and extending number sequences

Counting in steps of two, five and ten

Recalling addition and subtraction facts to 10 and beyond

Using efficient strategies to add and subtract numbers

Understanding subtraction as difference

Deriving and recording related addition and subtraction number sentences

Recording and interpreting number sentences

Choosing the appropriate operation when solving addition and subtraction problems

Solving practical problems involving repeated addition and grouping |

Counting and understanding number strand

Year 1 objectives	Year 2 objectives	Overcoming barriers sequences
Count reliably at least 20 objects, recognising that when rearranged, the number of objects stays the same; estimate a number of objects that can be checked by counting	Estimate a number of objects; round two-digit numbers to the nearest 10	● Can I round a two-digit number to the nearest 10?
Compare and order numbers, using the related vocabulary; use the equals (=) sign	Order two-digit numbers and position them on a number line; use the greater than (>) and less than (<) signs	● Can I show where a whole number is on a 0 to 100 number line? ● Can I tell someone how to order two-digit numbers?
Read and write numerals from 0 to 20, then beyond; use knowledge of place value to position these numbers on a number track and line		
	Count up to 100 objects by grouping them and counting in tens, fives or twos; explain what each digit in a two-digit number represents, including numbers where 0 is a place holder; partition two-digit numbers in different ways, including into multiples of 10 and 1	● Can I partition a two-digit number into tens and ones (units) and use this to create related addition and subtraction sentences? ● Can I partition one- and two-digit numbers in different ways?
Say the number that is 1 more or less than any given number, and 10 more or less for multiples of 10	Read and write two-digit and three-digit numbers in figures and words; describe and extend number sequences and recognise odd and even numbers	● Can I count on and back in equal steps and explain the patterns?
Use the vocabulary of halves and quarters in context	Find one half, one quarter and three quarters of shapes and sets of objects	

Knowing and using number facts strand

Year 1 objectives	Year 2 objectives	Overcoming barriers sequences
Derive and recall all pairs of numbers with a total of 10 and addition facts for totals to at least 5; work out the corresponding subtraction facts	Derive and recall all addition and subtraction facts for each number to at least 10, all pairs with totals to 20 and all pairs of multiples of 10 with totals up to 100	● Can I recall all addition and subtraction facts for each number to 10? ● Can I recall all pairs of numbers that total 20?
Count on and back in ones, twos, fives and tens and use this knowledge to derive the multiples of 2, 5 and 10 to the tenth multiple	Derive and recall multiplication facts for the 2, 5 and 10 times-tables and the related division facts; recognise multiples of 2, 5 and 10	● Can I count on in twos, fives and tens and use this to begin to say multiplication facts?
Recall the doubles of all numbers to at least 10	Understand that halving is the inverse of doubling and derive and recall doubles of all numbers to 20, and the corresponding halves	
	Use knowledge of number facts and operations to estimate and check answers to calculations	

Calculating strand

Year 1 objectives	Year 2 objectives	Overcoming barriers sequences
Relate addition to counting on; recognise that addition can be done in any order; use practical and informal written methods to support the addition of a one-digit number or a multiple of 10 to a one-digit or two-digit number Understand subtraction as 'take away' and find a 'difference' by counting up; use practical and informal written methods to support the subtraction of a one-digit number from a one-digit or two-digit number and a multiple of 10 from a two-digit number	Add or subtract mentally a one-digit number or a multiple of 10 to or from any two-digit number; use practical and informal written methods to add and subtract two-digit numbers	• Can I say what needs to be added to a two-digit number to make the next multiple of ten? • Can I add and subtract a multiple of ten? • Can I add or subtract a one-digit number to or from a two-digit number (bridging through a multiple of ten)? • Can I find the difference between a pair of numbers?
	Understand that subtraction is the inverse of addition and vice versa; use this to derive and record related addition and subtraction number sentences	• Can I write addition and subtraction sentences that use the same three numbers and explain how they are linked?
Use the vocabulary related to addition and subtraction and symbols to describe and record addition and subtraction number sentences	Use the symbols +, -, x, ÷ and = to record and interpret number sentences involving all four operations; calculate the value of an unknown in a number sentence	• Can I record number sentences and explain what the signs and numbers mean? • Can I work out and record the information I need to use to solve a puzzle or problem?
Solve practical problems that involve combining groups of 2, 5 or 10, or sharing into equal groups	Represent repeated addition and arrays as multiplication, and sharing and repeated subtraction (grouping) as division; use practical and informal written methods and related vocabulary to support multiplication and division, including calculations with remainders	• Can I use grouping to solve division problems? • Can I solve problems that involve multiplication as repeated addition? • Can I describe an array and write number sentences about it?

Attainment target 3: Shape, space and measure

Level 1	Level 2	Commonly-encountered difficulties
When working with 2-D and 3-D shapes, pupils use everyday language to describe properties and positions. They measure and order objects using direct comparison, and order events.	Pupils use mathematical names for common 3-D and 2-D shapes and describe their properties, including numbers of sides and corners. They distinguish between straight and turning movements, understand angle as a measurement of turn, and recognise right angles in turns. They begin to use everyday non-standard and standard units to measure length and mass.	Describing the properties of 2-D and 3-D shapes Identifying similarities and differences between shapes Choosing suitable units of measure in given contexts Reading and interpreting numbers on a scale Telling the time to the quarter hour

Understanding shape strand

Year 1 objectives	Year 2 objectives	Overcoming barriers sequences
Visualise and name common 2-D shapes and 3-D solids and describe their features; use them to make patterns, pictures and models	Visualise common 2-D shapes and 3-D solids; identify shapes from pictures of them in different positions and orientations; sort, make and describe shapes, referring to their properties	• Can I name and describe 2-D and 3-D shapes? • Can I find similarities and differences between shapes and use these to sort them into sets I can label?
Identify objects that turn about a point (e.g. scissors) or about a line (e.g. a door); recognise and make whole, half and quarter turns	Recognise and use whole, half and quarter turns, both clockwise and anticlockwise; know that a right angle represents a quarter turn	
	Identify reflective symmetry in patterns and 2-D shapes and draw lines of symmetry in shapes	
Visualise and use everyday language to describe the position of objects and direction and distance when moving them, for example when placing or moving objects on a game board	Follow and give instructions involving position, direction and movement	

Measuring strand

Year 1 objectives	Year 2 objectives	Overcoming barriers sequences
Estimate, measure, weigh and compare objects, choosing and using suitable uniform non-standard or standard units and measuring instruments (e.g. a lever balance, metre stick or measuring jug)	Estimate, compare and measure lengths, weights and capacities, choosing and using standard units (m, cm, kg, litre) and suitable measuring instruments	● Can I choose sensible units to measure?
	Read the numbered divisions on a scale and interpret the divisions between them (e.g. on a scale from 0 to 25 with intervals of 1 shown but only the divisions 0, 5, 10, 15 and 20 numbered); use a ruler to draw and measure lines to the nearest centimetre	● Can I read a scale to find how long or heavy something is?
Use vocabulary related to time; order days of the week and months; read the time to the hour and half hour	Use units of time (seconds, minutes, hours, days) and know the relationships between them; read the time to the quarter hour; identify time intervals, including those that cross the hour	● Can I use the position of both hands to tell the time to the quarter hour on a clock face?

Attainment target 4: Handling data

Level 1	Level 2	Commonly-encountered difficulties
Pupils sort objects and classify them, demonstrating the criterion they have used.	Pupils sort objects and classify them using more than one criterion. When they have gathered information, pupils record results in simple lists, tables and block graphs, in order to communicate their findings.	Using information recorded in graphs, charts, lists and tables to answer questions and compare data Selecting criterion to sort and classify data, using language including 'not'

Handling data strand

Year 1 objectives	Year 2 objectives	Overcoming barriers sequences
Answer a question by recording information in lists and tables; present outcomes using practical resources, pictures, block graphs or pictograms	Answer a question by collecting and recording data in lists and tables; represent the data as block graphs or pictograms to show results; use ICT to organise and present data	• Can I use a table, pictogram or block graph to answer questions?
Use diagrams to sort objects into groups according to a given criterion; suggest a different criterion for grouping the same objects	Use lists, tables and diagrams to sort objects; explain choices using appropriate language, including 'not'	• Can I organise a set of objects or information using properties that they do and do not have in common?

Links between objectives and units

Using and applying mathematics strand

Year 1 objectives	Units	Year 2 objectives	Units
Solve problems involving counting, adding, subtracting, doubling or halving in the context of numbers, measures or money, for example to 'pay' and 'give change'	1B1, 1D1, 1A2, 1B2, 1D2, 1E2, 1A3, 1B3, 1D3	Solve problems involving addition, subtraction, multiplication or division in contexts of numbers, measures or pounds and pence	2B1, 2D1, 2B2, 2D2, 2E2, 2B3, 2D3
Describe a puzzle or problem using numbers, practical materials and diagrams; use these to solve the problem and set the solution in the original context	1E1, 1E2, 1E3	Identify and record the information or calculation needed to solve a puzzle or problem; carry out the steps or calculations and check the solution in the context of the problem	2E1, 2E2, 2E3
Answer a question by selecting and using suitable equipment and sorting information, shapes or objects; display results using tables and pictures	1C1, 1C2, 1C3	Follow a line of enquiry; answer questions by choosing and using suitable equipment and selecting, organising and presenting information in lists, tables and simple diagrams	2C1, 2C2, 2C3
Describe simple patterns and relationships involving numbers or shapes; decide whether examples satisfy given conditions	1B1, 1B2, 1B3, 1E3	Describe patterns and relationships involving numbers or shapes, make predictions and test these with examples	2B1, 2B2, 2B3
Describe ways of solving puzzles and problems, explaining choices and decisions orally or using pictures	1A1, 1C1, 1A2, 1C2, 1A3, 1C3	Present solutions to puzzles and problems in an organised way; explain decisions, methods and results in pictorial, spoken or written form, using mathematical language and number sentences	2A1, 2A2, 2A3, 2E3

Counting and understanding number strand

Year 1 objectives	Units	Year 2 objectives	Units
Count reliably at least 20 objects, recognising that when rearranged, the number of objects stays the same; estimate a number of objects that can be checked by counting	1A1, 1B1, 1D1, 1A2,	Estimate a number of objects; round two-digit numbers to the nearest 10	2A1, 2A3
Compare and order numbers, using the related vocabulary; use the equals (=) sign	1A1, 1A2, 1A3	Order two-digit numbers and position them on a number line; use the greater than (>) and less than (<) signs	2A1, 2A3
Read and write numerals from 0 to 20, then beyond; use knowledge of place value to position these numbers on a number track and line	1A1, 1B1, 1A2, 1A3		
		Count up to 100 objects by grouping them and counting in tens, fives or twos; explain what each digit in a two-digit number represents, including numbers where 0 is a place holder; partition two-digit numbers in different ways, including into multiples of 10 and 1	2A1, 2A2. 2A3
Say the number that is 1 more or less than any given number, and 10 more or less for multiples of 10	1A1, 1B1, 1A2, 1B2, 1A3	Read and write two-digit and three-digit numbers in figures and words; describe and extend number sequences and recognise odd and even numbers	2A1, 2A2, 2B2, 2A3
Use the vocabulary of halves and quarters in context	1E1, 1E2, 1E3	Find one half, one quarter and three quarters of shapes and sets of objects	2E1, 2E2, 2E3

Knowing and using number facts strand

Year 1 objectives	Units	Year 2 objectives	Units
Derive and recall all pairs of numbers with a total of 10 and addition facts for totals to at least 5; work out the corresponding subtraction facts	1B1, 1B2, 1B3	Derive and recall all addition and subtraction facts for each number to at least 10, all pairs with totals to 20 and all pairs of multiples of 10 with totals up to 100	2B1, 2B2, 2B3
Count on and back in ones, twos, fives and tens and use this knowledge to derive the multiples of 2, 5 and 10 to the tenth multiple	1E1, 1E2, 1E3	Derive and recall multiplication facts for the 2, 5 and 10 times-tables and the related division facts; recognise multiples of 2, 5 and 10	2B1, 2E1, 2B2, 2E2, 2B3, 2E3
Recall the doubles of all numbers to at least 10	1E1, 1B2, 1E2, 1B3, 1E3	Understand that halving is the inverse of doubling and derive and recall doubles of all numbers to 20, and the corresponding halves	2B1, 2E1, 2E2, 2B3, 2E3
		Use knowledge of number facts and operations to estimate and check answers to calculations	2B1, 2B3

Calculating strand

Year 1 objectives	Units	Year 2 objectives	Units
Relate addition to counting on; recognise that addition can be done in any order; use practical and informal written methods to support the addition of a one-digit number or a multiple of 10 to a one-digit or two-digit number	1A1, 1A2, 1D2, 1A3, 1B3, 1D3	Add or subtract mentally a one-digit number or a multiple of 10 to or from any two-digit number; use practical and informal written methods to add and subtract two-digit numbers	2A1, 2D1, 2A2, 2D2, 2A3, 2D3
Understand subtraction as 'take away' and find a 'difference' by counting up; use practical and informal written methods to support the subtraction of a one-digit number from a one-digit or two-digit number and a multiple of 10 from a two-digit number	1A1, 1A2, 1D2, 1A3, 1B3, 1D3		
		Understand that subtraction is the inverse of addition and vice versa; use this to derive and record related addition and subtraction number sentences	2A1, 2A3
Use the vocabulary related to addition and subtraction and symbols to describe and record addition and subtraction number sentences	1A1, 1E1, 1A2, 1E2, 1A3, 1B3	Use the symbols +, -, x, ÷ and = to record and interpret number sentences involving all four operations; calculate the value of an unknown in a number sentence	2E1, 2A2, 2E2, 2A3, 2E3
Solve practical problems that involve combining groups of 2, 5 or 10, or sharing into equal groups	1E2, 1E3	Represent repeated addition and arrays as multiplication, and sharing and repeated subtraction (grouping) as division; use practical and informal written methods and related vocabulary to support multiplication and division, including calculations with remainders	2E1, 2E2, 2E3

Understanding shape strand

Year 1 objectives	Units	Year 2 objectives	Units
Visualise and name common 2-D shapes and 3-D solids and describe their features; use them to make patterns, pictures and models	1B1, 1B2, 1B3	Visualise common 2-D shapes and 3-D solids; identify shapes from pictures of them in different positions and orientations; sort, make and describe shapes, referring to their properties	2B1, 2B2, 2B3
Identify objects that turn about a point (e.g. scissors) or about a line (e.g. a door); recognise and make whole, half and quarter turns	1D2, 1D3	Recognise and use whole, half and quarter turns, both clockwise and anticlockwise; know that a right angle represents a quarter turn	2D2, 2D3
		Identify reflective symmetry in patterns and 2-D shapes and draw lines of symmetry in shapes	2B2
Visualise and use everyday language to describe the position of objects and direction and distance when moving them, for example when placing or moving objects on a game board	1D1, 1D2, 1D3	Follow and give instructions involving position, direction and movement	2D1, 2D2

Understanding shape strand

Measuring strand

Year 1 objectives	Units	Year 2 objectives	Units
Estimate, measure, weigh and compare objects, choosing and using suitable uniform non-standard or standard units and measuring instruments (e.g. a lever balance, metre stick or measuring jug)	1C1, 1D1, 1C2, 1D2, 1C3, 1D3	Estimate, compare and measure lengths, weights and capacities, choosing and using standard units (m, cm, kg, litre) and suitable measuring instruments	2C1, 2D1, 2C2, 2D2, 2C3, 2D3
		Read the numbered divisions on a scale and interpret the divisions between them (e.g. on a scale from 0 to 25 with intervals of 1 shown but only the divisions 0, 5, 10, 15 and 20 numbered); use a ruler to draw and measure lines to the nearest centimetre	2C1, 2D1, 2C2, 2D2, 2C3, 2D3
Use vocabulary related to time; order days of the week and months; read the time to the hour and half hour	1D1, 1D2, 1D3	Use units of time (seconds, minutes, hours, days) and know the relationships between them; read the time to the quarter hour; identify time intervals, including those that cross the hour	2D1, 2D2, 2D3

Handling data strand

Units	Year 1 objectives	Year 2 objectives	Units
Answer a question by recording information in lists and tables; present outcomes using practical resources, pictures, block graphs or pictograms	1C1, 1C2, 1C3	Answer a question by collecting and recording data in lists and tables; represent the data as block graphs or pictograms to show results; use ICT to organise and present data	2C1, 2C2, 2C3
Use diagrams to sort objects into groups according to a given criterion; suggest a different criterion for grouping the same objects	1C1, 1C2, 1B3, 1C3	Use lists, tables and diagrams to sort objects; explain choices using appropriate language, including 'not'	2C1, 2C2, 2C3

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