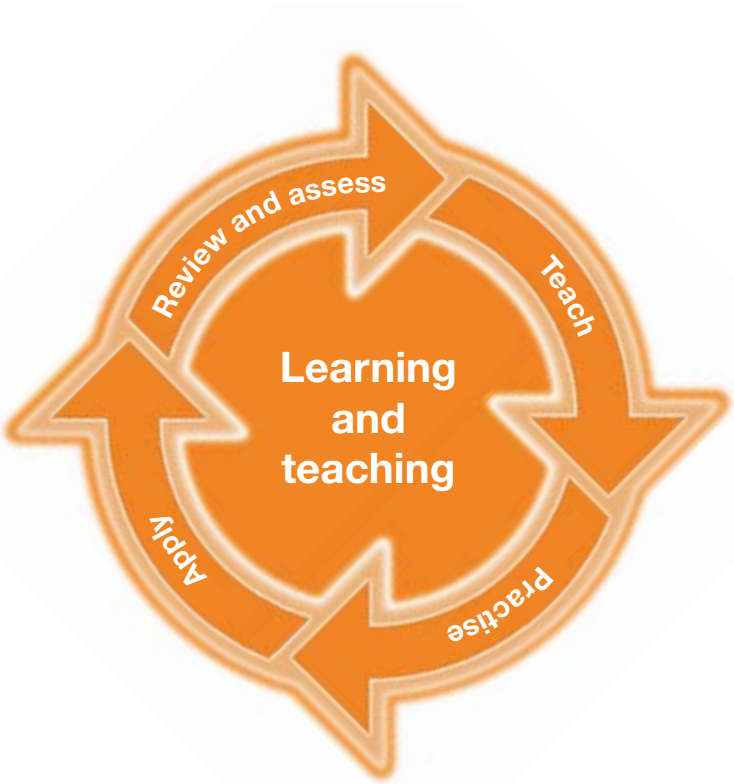
The National Strategies
Primary

Securing level 3 in mathematics

department for
children, schools and families

Securing level 3 in mathematics



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HERTFORD OFFSET 04-2009

Securing level 3 in mathematics

These materials are intended to support you in ensuring that as many children as possible reach level 3 by the end of Year 4. The guidance identifies key areas of learning that children need to secure to attain level 3 in mathematics. While you will integrate the ideas from these materials into your ongoing planning, they could also be used to plan targeted support for particular groups of children. There is a double-page spread for each of the six areas of mathematics:

- Understanding the number system
- Securing mental addition and subtraction
- Understanding and using multiplication and division
- Visualising and classifying shapes
- Solving problems involving money and measures
- Reading and interpreting tables and graphs.

Remember

Every day is a mental mathematics day – ensure that children engage in sustained mental work each day (at least 10–15 minutes) to secure and develop knowledge, skills and understanding in mathematics. *Don't expect confidence in working mentally if practice, rehearsal and reasoning have not taken place.*

Hands-on learning is still important – provide appropriate practical equipment for children to use and manipulate, to help them to explore how and why things work and to learn to visualise, describe and represent what is in front of them. *Don't just talk about weighing scales, use one; using apparatus is better than imagining how it works.*

Seeing mathematics through models and images supports learning – help children to see how mathematics works and can be represented through physical objects, pictures or diagrams such as place-value cards, number sticks, number lines, representations of fractional parts. *Don't expect children to visualise and 'see' how something works if they have no models and images to draw from.*

Talking mathematics clarifies and refines thinking – give children the vocabulary and language of mathematics; provide activities and time for them to discuss mathematics, using this language. Teach children the precision of language, for example, using: prism, equals, factor and how to express their reasoning using language such as: if... then... , because, cannot be, never, sometimes, always. *Don't expect children to explain or provide reasons if they have no opportunity to use, develop and refine the language to do so.*

Make mathematics interesting – share your interest in mathematics with the children. Give children mathematics that engages them in: estimating and finding out about the number of bricks in the school building, testing out ideas such as when the sum of three consecutive whole numbers is a multiple of six, answering intriguing questions such as how many times their heart beats in ten minutes compared with that of an elephant or a mouse. *Don't expect children to be interested in mathematics if you don't share an interest and all their mathematics is routine and dull.*

Learning from mistakes should build up children's confidence – look out for mistakes and encourage children to recognise that making mistakes is something everyone does. Show children common errors and get them to identify and correct them. Encourage children to work with a partner and share their work. *Don't just tell children something is wrong; help them to see what went right and to identify when it went wrong.*

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Understanding the number system

Level 3 standards to be achieved:

Count in equal steps including counting over boundaries
Compare and order whole numbers to 1000, using knowledge of the value of each digit
Multiply and divide numbers by 10, understanding the effect
Round whole numbers to the nearest 10 and 100 and use this to make approximations
Use sense of number to make approximations and compare numbers and amounts
Understand and use negative numbers and numbers with one or two decimal places in contexts involving measures or money
Read, write and recognise fractions

For children to attain level 3, they need to:

- read and write numbers that contain zero as a place holder, understanding its role
- count in ones and tens, backwards and forwards, over boundaries, for example, 187, 197, 207…
- identify the important digits to compare and order two or more numbers, for example, 184 and 275 (hundreds digit), 384 and 392 (tens digit), 407 and 410 (units and tens digits)
- position numbers approximately on partially marked number lines
- round a number by identifying the multiple of 10 or 100 to which it is closest
- compare and order negative and positive numbers, using a number line
- identify the value of each digit in measures such as grams and in money
- understand the role of the numerator and denominator of a fraction
- identify, read and write fractions to describe a proportion of a shape or amount, for example, appreciate that, since there are 100 centimetres in a metre, 1 centimetre is equal to $\frac{1}{100}$ of a metre.

Make sure that:

you regularly use partially marked or blank number lines as part of oral and mental work
you use models such as place-value cards, beadstrings and base-ten apparatus to help children develop a secure understanding of place value
*children regularly count in equal steps as part of oral and mental work – include counting in decimal numbers and measures, for example: 25cm, **50cm**, 75cm, **1m**, 1m 25cm... emphasising the multiples of 50cm*
children position fractions on number lines and count in fractions, for example: $\frac{1}{5}$, $\frac{2}{5}$, $\frac{3}{5}$...
you use calculators or place-value grids to demonstrate the effect of multiplying and dividing numbers by 10 – help children appreciate that moving each digit one column to the left increases the number ten-fold, for example, 50p is 10 times the value of 5p
children experience situations or problems in which rounding or approximating are needed
children regularly have opportunities to explain how they used their understanding of the number system to help them to calculate efficiently, for example, 403 – 198

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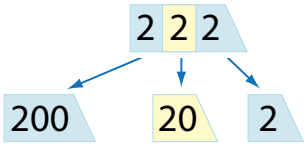
Teaching and learning resources

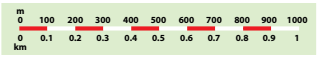
Number lines

Fractions ITP

Place-value cards



Counting stick with further options spreadsheet



Beadsticks ITP

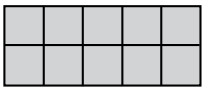
Intervention materials

Springboard 4
Units 1, 4 and 7

Overcoming barriers in mathematics – level 2 to 3
Can I read, write and partition whole numbers to 1000?
Can I order two-digit and three-digit numbers and position these on a number line?
Can I round whole numbers up to 1000 to the nearest 10 or 100?
Can I multiply one-digit and two-digit numbers by 10 and 100?
Can I read and write fractions and explain their meaning?

Wave 3 materials
+/– Year 4 booklets 1 and 2

Assessment checklist

'I can' statements	Assessment examples
I can find a missing number in a sequence	Find the next two numbers: 189, 192, 195, __, __ Find the missing numbers: ◯ 738 ◯ 718 708 ◯
I understand the value of each digit in a three-digit number and can explain how I know	Max puts these numbers in order, from smallest to largest. What would be the third number? 835, 535, 538, 388, 508 How many three-digit numbers is it possible to write if they all have 6 in the tens column?
I can multiply/divide a number by 10	Ann says that 38 x 10 is 308. Explain how you know she is wrong. How many £10 notes are needed to make £470?
I can round numbers to find approximate answers to calculations or problems	Which of these numbers is closest to the answer of 342 – 119? 200 220 230 250 300
I can order negative and positive numbers	The temperature at noon on Monday is –2°C and on Tuesday is –6°C. Which day was warmer at noon? Explain how you know.
I can solve problems that involve decimal numbers as money or measures	How many 10p pieces do you need to make £2.30? Samir walks 0.8km. How many metres is this?
I can recognise and write a fraction of a shape	Would a chocolate lover rather have ½ or ⅗ of this bar of chocolate? Explain your answer. 

Securing mental addition and subtraction

Level 3 standards to be achieved:

Use number facts and place value to add and subtract one- and two-digit numbers efficiently
Use informal jottings, including number lines, to record stages in mental calculations
Understand that addition and subtraction are inverse operations
From a range of mental methods, select and use the most appropriate depending on the numbers in a calculation
Use appropriate calculation methods to solve problems involving addition/subtraction
Draw on experience of mental methods to explain steps in written methods for addition and subtraction

For children to attain level 3, they need to:

- use known facts to work out related ones, for example, use 7 + 8 = 15 to work out 37 + 8 and 150 – 80
- partition two-digit numbers to support efficient calculation, for example, 41 – 19 = 21 + 20 – 19
- draw their own number lines to show steps in a calculation
- use the inverse operation to check answers, particularly for subtraction, for example, check 56 – 18 = 38 using 38 + 18
- identify the appropriate calculation(s) needed to solve a problem
- consider the numbers involved in a particular calculation to make appropriate decisions on which mental method to choose
- work out subtraction by counting backwards and by counting forwards and decide which is the more efficient method for particular calculations
- use correct mathematical vocabulary to describe/explain their calculation methods.

Make sure that:

children rehearse addition and subtraction facts regularly through daily oral and mental work
children are encouraged to jot down steps to keep a record to help with a calculation
you encourage children to move from counting strategies to using known facts to calculate efficiently
children are able to add and subtract multiples of 10 and 100 rapidly, using known facts
you pick up on common errors such as subtracting the wrong digit, for example, saying that 92 – 38 = 66 because 90 – 30 = 60 and 8 – 2 = 6
children can find missing numbers in calculations such as 82 – ☐ = 39
children understand and use appropriate vocabulary, including the term 'difference'
children have regular opportunities to explain and compare calculation methods
you use children's understanding of mental methods, such as partitioning, as the basis for the development of written methods, initially using expanded methods.

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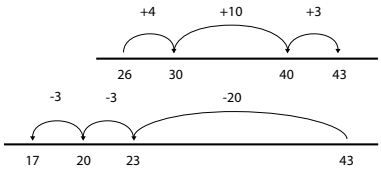
Teaching and learning resources

Beadstrings

Number lines: 43 – 26 = 17



Number line ITP

Addition and subtraction facts spreadsheet

Intervention materials

Springboard 4
Units 2, 3 and 9

Overcoming barriers in mathematics – level 2 to 3
Can I recall and use addition and subtraction facts for numbers to 20?
Can I find pairs of numbers that total 100?
Can I subtract mentally combinations of one-digit and two-digit numbers?
Can I say a subtraction fact that is the inverse of an addition fact and vice versa?

Wave 3 materials
+/– Year 4 booklet 3

Assessment checklist

'I can' statements	Assessment examples
I can add two-digit numbers, choosing an efficient method	What number is 27 more than 45? What number is 19 more than 45? Explain how you worked out these two calculations. Work out the missing digits: 3☐ + ☐2 = 85
I can subtract one- and two-digit numbers, choosing an efficient method	Work out these subtraction calculations: 72 – 5 72 – 68 70 – 3 82 – 15 32 – 28 70 – 66 Did you use the same method for each calculation? If not, why not? Explain your methods to a friend and together compare your methods.
I can record the steps of my addition/subtraction methods	Work out 47 + 38. Record how you work this out and explain what you have written.
I can check my answer to a calculation	Paul says 72 – 15 = 63. Write down an addition calculation that you could do to check this. Paul's working is: 70 – 10 = 60 and 5 – 2 = 3 so 72 – 15 = 63. Where has Paul has gone wrong?
I can use addition and subtraction to solve problems	Layla has 45p in my money bank and 28p in her purse. How much more money does she need to buy a comic that costs £1?

Understanding and using multiplication and division

Level 3 standards to be achieved:

Use multiplication/division facts and place value to solve problems involving two-digit numbers
Use informal jottings to record steps in mental calculations
Understand that multiplication and division are inverse operations
Understand that division can involve both equal sharing and equal grouping
Use division and multiplication to find fractions of amounts
Use understanding of mental methods and place value to start to develop secure written methods for multiplication and division

For children to attain level 3, they need to:

- recognise when situations involving repeated addition are more efficiently represented using multiplication
- recognise when situations involving equal sharing or grouping or repeated subtraction are more efficiently represented using division
- use known facts to work out related ones, for example, use 3 x 4 = 12 to answer 30 x 4 or 120 ÷ 40
- represent arrays using multiplication and carry out multiplication calculations using arrays
- use partitioning to multiply a two-digit number by a single-digit number and record steps
- interpret division as the inverse of multiplication, for example, understanding that 24 ÷ 4 can be found using 4 x 6 = 24
- divide a two-digit by a single-digit number by splitting it into sensible chunks
- find and interpret remainders in division, rounding up or down where appropriate
- find a unit fraction, for example, ⅕ of an amount using division, then multiply the answer to find non-unit fractions, for example, ⅖, ⅗.

Make sure that:

children rehearse multiplication and division facts regularly through daily oral and mental work
children use multiplication rather than continuing to use inefficient repeated addition
children can use known facts to multiply or divide multiples of 10, working out, for example, 30 x 5 or 280 ÷ 4
children are able to recognise when a word problem involves multiplication or division
children recognise 'special case' calculations, for example, dividing by 4 by halving and halving again
children can find missing numbers in calculations such as ☐ ÷ 5 = 12 and 180 ÷ ☐ = 30
children have regular opportunities to explain and compare calculation methods
children associate the language of division with finding a fraction, for example, they associate dividing by 5 with finding a fifth
you use children's understanding of mental methods as the basis for the development of written methods such as the grid method and chunking.

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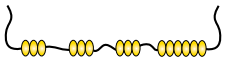
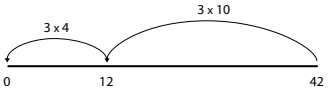
Teaching and learning resources

Division by grouping, using beadstrings



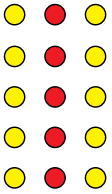
Division by chunking on a number line: 42 ÷ 3



Multiplication: progression from arrays to the grid method

Remainders after division ITP

Arrays



Intervention materials

Springboard 4
Units 5, 9 and 10

Overcoming barriers in mathematics – level 2 to 3
Can I recall multiplication and division facts for the 2, 3, 4, 5 and 10 times-tables?
Can I use understanding of multiplication and division to solve problems?
Can I multiply a two-digit by a one-digit number?
Can I divide a two-digit by a one-digit number and explain any remainder?
Can I find a unit fraction of a shape, number or quantity by splitting it into the correct number of equal parts?

Wave 3 materials
x/÷ Year 4 booklets 1, 2, 4 and 5

Assessment checklist

'I can' statements	Assessment examples
I can give the multiplication sentence that is linked to a division sentence and vice versa	What multiplication could you work out to check 32 ÷ 4 = 8? What is the missing number in 35 ÷ ☐ = 5? How do you know?
I can multiply a two-digit by a one-digit number and record the steps I take	What is 20 x 3? Use your answer to work out 21 x 3, 22 x 3, 23 x 3... Explain how you did this. In a pile of coins, 17 are 5p coins. How much is this in total? Record your working.
I can divide a two-digit by a one-digit number and record the steps I take	How can you use the fact that 60 ÷ 3 = 20 to help you find 72 ÷ 3? Divide 75 by 5, recording your working.
I can solve problems that involve multiplication or division	My dad does 25 minutes of exercise every day. How much exercise does he do in a week? 36 children need to sit on benches. Five children can sit on one bench. How many benches are needed?
I can find fractions of amounts	There are 28 children in the class. ⅐ of them are girls. How many girls is this?

Visualising and classifying shapes

Level 3 standards to be achieved:

Name 2-D and 3-D shapes, draw and identify them in different orientations
Recognise 3-D shapes from 2-D drawings
Describe properties of 2-D and 3-D shapes, using appropriate vocabulary
Use properties to sort and classify sets of shapes
Recognise symmetry in 2-D shapes, complete shapes with reflective symmetry
Visualise shapes from descriptions or partial drawings

For children to attain level 3, they need to:

- name, describe and sort 2-D shapes, using a range of properties including number of sides, equal sides and number of right angles
- name, describe and sort 3-D shapes, using number and shape of faces, number of edges and vertices
- compare shapes by describing what is the same and what is different about them
- use shape vocabulary accurately, including 2-D, side, vertex, polygon, circle, semi-circle, diagonal, regular, irregular, 3-D, face, edge, net, prism, cylinder, sphere
- understand that, in regular shapes, all sides are equal and all angles are equal
- use Venn and Carroll diagrams to sort shapes according to defined criteria
- draw on their practical experience of 2-D and 3-D shapes to visualise shapes, and generate and extend patterns.

Make sure that:

shape and space activities are included in oral and mental starters
children handle, draw and make shapes as well as seeing their representations
children have opportunities to draw and manipulate shapes, using squared and isometric paper and ICT as well as art straws, construction kits or pinboards
you model and prompt accurate and precise use of shape vocabulary and display key terms
children refine their understanding and use of the language of shape through exploring shapes that do and do not satisfy particular criteria
children use shapes to solve problems, for example, investigating and describing the different shapes that can be created by placing two given shapes together side by side
children are given opportunities to develop visualisation skills, for example, 'if you imagine a triangle and remove a corner, describe and name the shape that is left'
you show children different 2-D representations of the same 3-D shape and use ICT software to allow them to explore changes in the orientation

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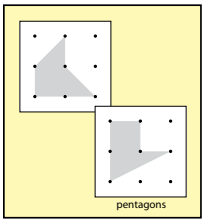
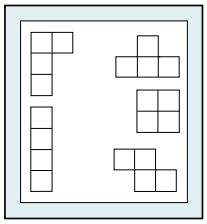
Teaching and learning resources

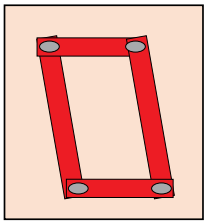
Pinboards and elastic bands



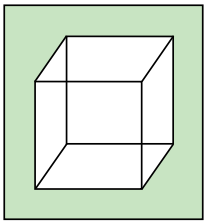
Shape tiles



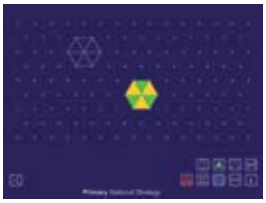
Sticks or geostrips



Art straws or construction kits

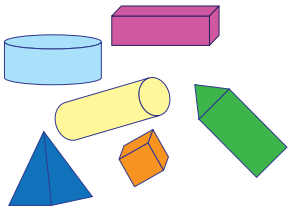


Isometric grid ITP



Fixing points ITP

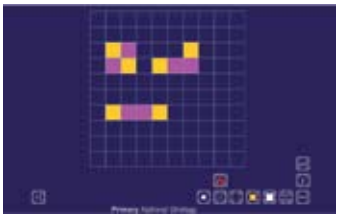
Sets of plastic or wooden shapes



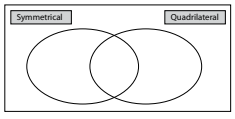
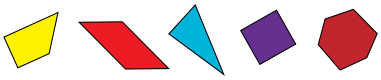
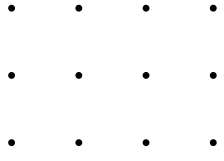
Intervention materials

Overcoming barriers in mathematics – level 2 to 3
Can I make, name and describe 2-D and 3-D shapes?
Can I sort shapes, choosing my own criteria?

Area ITP



Assessment checklist

'I can' statements	Assessment examples
I can recognise 2-D and 3-D shapes and describe their properties	Describe some ways in which these two shapes are the same and some ways in which they are different. Which shape is regular? Describe how you know. 
I can sort shapes describing how I have classified them *I can identify whether shapes are symmetrical*	Place the shapes below in the correct places in the Venn diagram. Make shapes of your own to add to each section of the diagram.  
I can draw shapes on a grid	On the grid, join dots to make triangles that do not have a right angle. Use a ruler. Can you draw a triangle with a line of symmetry that does not have a right angle? 
I can visualise shapes	Imagine a square cut along a diagonal to make two triangles. Describe these two triangles. If you join the different sides of the two triangles together, what new shapes can you make? What do these new shapes look like?

Solving problems involving money and measures

Level 3 standards to be achieved:

Identify the appropriate operation(s) needed to solve a problem
Record working for each calculation needed to solve a problem
Understand and use £.p notation and generate simple budgets and costings
Solve problems that involve scaling up or down in everyday practical contexts
Recognise standard units of measurement and make simple conversions when needed to solve problems involving measures
Use standard units of time and work out simple time differences

For children to attain level 3, they need to:

- identify important information in a word problem and use this to select the appropriate operation(s)
- recognise when a problem involves more than one step, identify the steps and record working for each step
- explain their method; share and compare their methods with others
- check that their answer to a problem is of a reasonable size and answers the original question
- include units of measure in the answer where appropriate
- draw and interpret time lines to find time differences.

Make sure that:

children recognise which problems require them to carry out multiplication or division calculations
you spend time in lessons discussing the strategies involved in solving a word problem – it is more beneficial to work through one or two problems in depth than to look at several superficially
children have opportunities to solve practical problems, for example, scaling up or down the ingredients of a recipe to cook for different groups of people
you give children opportunities to write, solve and discuss their own word problems and those written by their peers
children appreciate why one pound and five pence should be written as £1.05 not £1.5
children use appropriate methods to work out change, for example, using a number line to find the difference between the cost of goods bought and money given
children know the relationships between standard units of metric measure and units of time and can make simple conversions.
children prepare a budget for an event such as a picnic or a stall at a school fete

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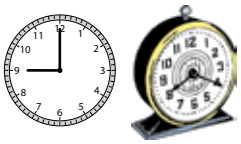
Teaching and learning resources

Coins

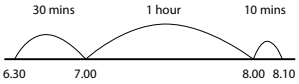
Clocks



Price lists and catalogues

BANKSLEY POOL
Swimming prices
Adult swim – £2.50
Child swim – £1.20
Opening hours
8 a.m. – 7 p.m. daily

Timelines



Measuring cylinder, Measuring scales and Tell the time ITPs

Intervention materials

Springboard 4
Unit 6 and 10

Overcoming barriers in mathematics – level 2 to 3
Can I identify the calculation needed to solve a problem?
Can I identify the stages in a two-step problem?
Can I explain and record my methods and solutions?
Can I explain the relationships between kilometres and metres, metres and centimetres, kilograms and grams, litres and millilitres?
Can I work out how long it is between two times?

Assessment checklist

'I can' statements	Assessment examples
I can identify what operation(s) I need to do to solve a problem	Ben and Jess are answering this problem: Mary has collected 61 keyrings, Jo has 45. How many more keyrings does Mary have than Jo? Ben does the calculation 61 + 45. Jess does the calculation 61 – 45. Who is correct? Explain how you know.
I can jot down the steps to show how I worked out a problem *I can explain how I solved a problem*	Josh buys one coconut and half a kilogram of bananas. How much does he pay? Based on KS2 2005 Paper B level 3. © QCA  Coconut 78p Bananas £1.50 per kg Show your working. Explain your method to a friend.
I can solve problems involving money	Holly has these coins. She wants to buy a notebook costing £1.50. How much more money does she need?  I pay for a coach trip costing £7.80 with a £10 note. How much change should I get?
I can solve problems that involve measures	A jug holds 2 litres of juice. How many 150ml cups of juice can be filled from the jug? How much juice will be left in the jug?
I can solve problems that involve time	A film starts at 6.30 p.m. and ends at 8.10 p.m. How many minutes does the film last? I travel on a journey lasting 1 hour 25 minutes. The train leaves the station at 7.45 a.m. What time does the train arrive?

Reading and interpreting tables and graphs

Level 3 standards to be achieved:

Understand how different types of graphs, charts and sorting diagrams are used to present data
Read and interpret titles and labels to identify what information is shown on a particular graph
Work out the size of each interval to read non-unit scales accurately
Make sensible estimates for values that fall between two marked intervals on a scale
Identify and read the information from a table or a graph in order to answer questions
Identify the appropriate calculations that need to be carried out to solve a data problem

For children to attain level 3, teach them how to:

- recognise key features of tables, and diagrams such as frequency charts, pictograms, bar charts, Venn and Carroll diagrams
- use all the information given in a graph or table, including the title and labels, to interpret the data it represents
- identify the appropriate column, row or cell of a table to find required information
- work out the value of each interval on a scale, count along the scale to check and write in unmarked amounts
- use their understanding of proportion to make sensible estimates for measures that fall between two marked intervals on a scale
- find and note down all the information needed to solve a problem
- identify and carry out the appropriate calculations needed to solve a problem involving data, including questions such as How many more...? and How many ... altogether?

Make sure that:

you build regular opportunities into oral and mental starters to rehearse the skills needed to read scales accurately, for example, 'what value lies exactly a quarter of the way between these two intervals on my scale?'
children are given a wide range of tables, graphs and charts to interpret and use to read information
children have experience of vertical and horizontal bar charts
children regularly interpret real data, for example, timetables, tables from magazines or graphs from the internet
children annotate graphs and charts where possible to help them read data accurately
children discuss and compare their methods for solving data-handling problems
children record their working when answering problems that involve calculating with data
information presented in tables and graphs is used as a basis for the practice of mental and written calculation.

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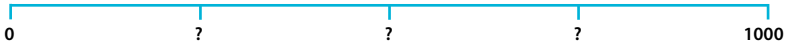
Teaching and learning resources

Counting sticks

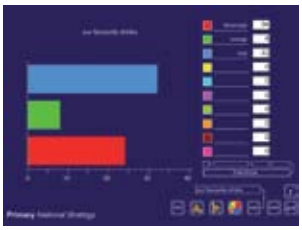
Number lines



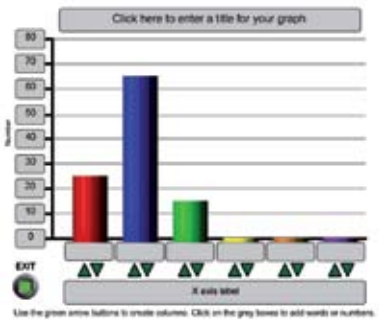
Real data

Edinburgh	–	09:35	–	–	13:35	–	–
Glasgow	09:15	–	11:15	13:15	–	13:45	15:15
Stirling	09:57	–	11:57	13:57	–	14:29	15:57
Perth	10:34	10:51	12:34	14:34	14:50	15:15	16:35
Inverness	–	13:10	–	–	17:0 5	–	–

Data handling ITP



Handygraph ITP

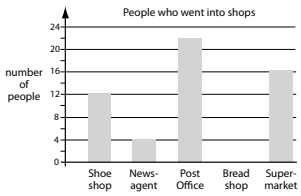


Intervention materials

Springboard 3
Unit 10

Overcoming barriers in mathematics – level 2 to 3
Can I create and interpret a pictogram where the symbol represents more than one object?
Can I create and interpret bar charts?
Can I make and use lists and tables to organise and interpret information to solve a problem?
Can I use data to answer a question?

Assessment checklist

'I can' statements	Assessment examples
I can read information accurately from different sorts of graphs and charts	Chris did a survey of the number of people who went into shops in one hour. How many people went into the supermarket during the hour? 13 people went into the bread shop. Represent this information on the graph.  Based on image from KS2 1997 Paper B level 3. © QCA
I can interpret the scales along the axes of a graph to read data accurately	
I can work out what information to use to answer a data-handling question	This table shows the numbers of children who went walking, sailing or climbing at an outdoor centre. How many children went sailing in May, June and July altogether? In June, how many more children went walking than climbing? Based on KS2 2000 Paper A level 3. © QCA
I can identify what calculations need to be done to answer a data-handling problem	

	May	June	July
walking	25	80	75
sailing	15	42	50
climbing	18	27	23

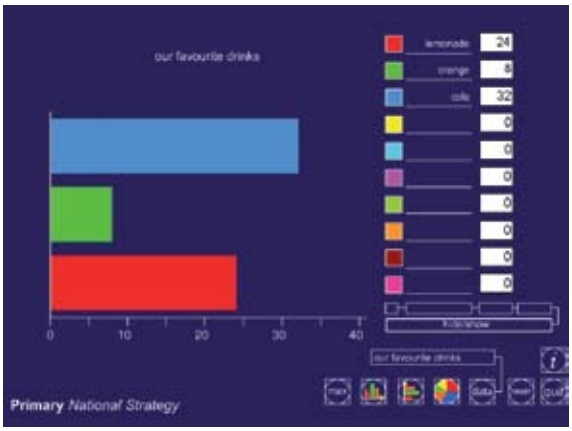
Where can I find the resources?

ICT resources

Interactive teaching programs (ITPs)

These programs can be downloaded from www.standards.dcsf.gov.uk/nationalstrategies/primary. Navigate to the Mathematics Framework area and then to the Mathematics resource library. Refine the results by selecting ICT resources and then Interactive Teaching Programs.

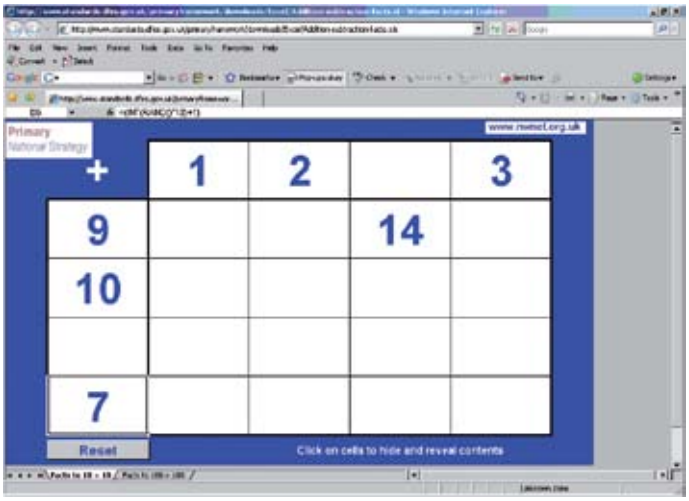
Data handling ITP



Spreadsheets

These programs can be downloaded from www.standards.dcsf.gov.uk/nationalstrategies/primary. Navigate to the Mathematics Framework area and then to the Mathematics resource library. Refine the results by selecting ICT resources and then spreadsheets.

Addition and subtraction facts spreadsheet



Intervention materials

Springboard 3 and Springboard 4

These materials provide lessons to support intervention for those children who are working just below level 3. They can be downloaded from www.standards.dcsf.gov.uk/nationalstrategies/primary. Navigate to the Mathematics Framework area and then to the Mathematics resource library. Refine the results by selecting the appropriate Springboard materials from the intervention materials section.

Overcoming barriers in mathematics – helping children move from level 2 to level 3

This is a booklet and CD-ROM containing materials designed to help teachers move children from level 2 into level 3. The materials can be ordered online on the teachernet publications website.

http://publications.teachernet.gov.uk/default.aspx?PageFunction=productdetails&PageMode=publications&ProductId=DCSF-00149-2008&

Supporting children with gaps in their mathematical understanding – Wave 3

The Wave 3 mathematics pack aims to help teachers identify and address gaps in learning for children who are working significantly below age-appropriate levels. They can be downloaded from www.standards.dcsf.gov.uk/nationalstrategies/primary. Navigate to the Mathematics Framework area and then to the Mathematics resource library. Follow links to inclusion and then the Wave 3 materials.

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Acknowledgments

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QCA test questions and mark schemes can be found at www.testbase.co.uk.

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