Year 3 Block A: Counting, partitioning and calculating Unit 1

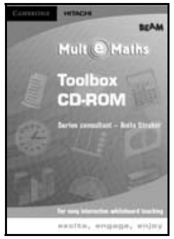
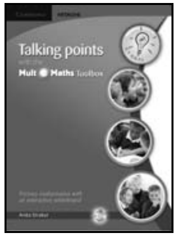
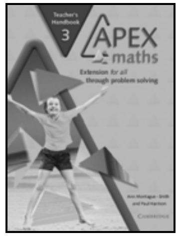
Objectives for this unit	Mult-e-Maths activities
Describe and explain methods, choices and solutions to puzzles and problems, orally and in writing, using pictures and diagrams	**UA3L1 Domino puzzles** Investigating ways of arranging dominoes in a square or rectangle so that each side has the same number of spots **UA3L9 Place value problems** Using knowledge of place value in strategic number games and puzzles
Read, write and order whole numbers to at least 1000 and position them on a number line; count on from and back to zero in single-digit steps or multiples of 10	**CN3S1 Numbers in words and digits** Matching numbers in words with their representation in digits **CN3S2 What's the position?** Using ordinal numbers to describe patterns **CN3S3 Estimating using a number line** Estimating the position of a point on a 0 to 1000 number line **CN3S4 Positioning numbers on a number line** Identifying the positions of whole numbers on a number line and fractional relationships between them **CN3S5 Identifying numbers on a number line** Identifying the numbers one quarter of the way along, three quarters of the way along and at the end of a number line, given the halfway value **CN3S6 Ordering numbers** Ordering 2- and 3-digit numbers **CN3S7 Comparing numbers** Saying which of two given 3-digit numbers is greater and identifying numbers between two given 3-digit numbers **CN3S10 Counting on and back** Extending sequences by counting forwards and backwards in single-digit step sizes **CN3L1 Numbers in figures and words** Investigating writing numbers to 1000 in figures and words **CN3L4 Comparing numbers** Comparing 3-digit numbers **CN3L5 Ordering numbers** Ordering numbers to at least 1000
Partition three-digit numbers into multiples of 100, 10 and 1 in different ways	**CN3S14 Place value and ordering** Making numbers to 1000 using place value cards and ordering them **CN3L8 Understanding place value** Understanding the values of the digits in 3-digit numbers
Derive and recall all addition and subtraction facts for each number to 20, sums and differences of multiples of 10 and number pairs that total 100	**NF3S5 Addition facts to 20** Adding pairs of numbers with totals up to 20 **NF3S6 Subtraction facts to 20** Subtracting from numbers up to 20 **NF3L4 Multiples of 100 that total 1000** Finding and using pairs of multiples of 100 that total 1000
Add or subtract mentally combinations of one-digit and two-digit numbers	**CA3S2 Larger number first** Adding a 2-digit number to a 1-digit number **CA3S15 Using patterns** Spotting inconsistencies in patterns of calculations and using the patterns to find the answers to other calculations **CA3L3 Bridging through 10** Adding and subtracting single digits to or from 2-digit numbers by bridging through multiples of 10

End-of-year expectations for this unit are in **bold**.

Vocabulary

problem, solution, calculate, calculation, answer, method, explain, reasoning, pattern, predict, place value, partition, digit, ones, tens, hundreds, one-digit number, two-digit number, three-digit number, compare, order, equals (=), count on/back, add, subtract, multiply, times, divide, share, group, sum, total, difference, plus, minus, pound (£), penny/pence (p), note, coin, units of measurement and their abbreviations	Use ***A Maths Dictionary for Kids*** when discussing mathematical vocabulary for this unit. 

Other resources

Use the following ***Mult-e-Maths Toolbox*** tools for this unit: • Abacus • Place value chart/Place value mat • Number grids/Number lines • Function machine • Dartboards 	Use activity **N3.5 Crooked rules** from ***Talking points with the Mult-e-Maths Toolbox*** to investigate the positioning of digits in 3-digit numbers. 	Use activity **7 Which way round?** from ***Apex Maths 3*** to practise mental addition in the context of a place value investigation. Use activity **1 Our milkman** or activity **2 Palindromes** from ***Apex Maths 3*** to focus on solving number problems by using pictures and diagrams. 

Year 3 Block A: Counting, partitioning and calculating Unit 2

Objectives for this unit	Mult-e-Maths activities
Describe and explain methods, choices and solutions to puzzles and problems, orally and in writing, using pictures and diagrams	**UA3L2 Sums and differences** Choosing and using operations to create sums and differences of 2-digit numbers
Partition three-digit numbers into multiples of 100, 10 and 1 in different ways	**CN3S8 Adding and subtracting 1, 10 and 100** Adding and subtracting 1, 10 and 100 and multiples of them **CN3S9 Changing digits** Identifying what to add or subtract to change one digit of a 3-digit number **CN3S13 What's my number** Identifying a 3-digit number given information about its digits **CN3L6 Counting in 1s, 10s 100s** Investigating how the digits of a number change when you add or subtract 1, 10 or 100
Round two-digit or three-digit numbers to the nearest 10 or 100 and give estimates for their sums and differences	**CN3S15 Estimating and rounding** Estimating quantities and rounding 2-digit numbers to the nearest 10 **CN3L9 Rounding** Rounding numbers to the nearest 10 and 100
Derive and recall all addition and subtraction facts for each number to 20, sums and differences of multiples of 10 and number pairs that total 100	**NF3S4 Total 1000** Identifying pairs of multiples of 100 with a total of 1000 and using them to solve subtractions from 1000 **NF3L1 Addition facts to 20** Investigating addition facts for numbers to 20 **NF3L3 Making 100** Finding pairs of numbers that total 100.
Add or subtract mentally combinations of one-digit and two-digit numbers	**CA3S7 Counting on through multiples of 10** Adding 1-digit numbers to 2-digit numbers by bridging through multiples of 10 **CA3S8 Counting back through multiples of 10** Subtracting 1-digit numbers from 2-digit numbers by bridging through multiples of 10 **CA3L4 Using near multiples of 10** Adding and subtracting mentally using near multiples of 10 and adjusting **CA3L5 Small differences** Using counting up from the smaller number to solve subtractions and deciding when this method is most appropriate
Multiply one-digit and two-digit numbers by 10 or 100, and describe the effect	**CA3L17 Multiplying by 10** Using place value to multiply by 10
Derive and recall multiplication facts for the 2, 3, 4, 5, 6 and 10 times-tables and the corresponding division facts; recognise multiples of 2, 5 or 10 up to 1000	**NF3S10 2, 5 and 10 times-tables** Identifying numbers that are answers in the 2, 5 or 10 times-tables

End-of-year expectations for this unit are in **bold**.

Vocabulary

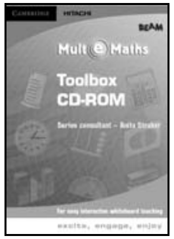
problem, solution, calculate, calculation, answer, method, explain, reasoning, pattern, predict, place value, partition, digit, ones, tens, hundreds, one-digit number, two-digit number, three-digit number, compare, order, equals (=), count on/back, add, subtract, multiply, times, divide, share, group, sum, total, difference, plus, minus, pound (£), penny/pence (p), note, coin, units of measurement and their abbreviations

Use ***A Maths Dictionary for Kids*** when discussing mathematical vocabulary for this unit.

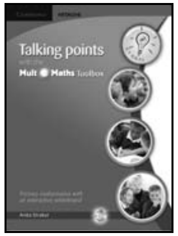
Other resources

Use the following ***Mult-e-Maths Toolbox*** tools for this unit:

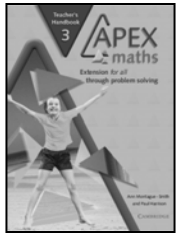
- Place value chart/Place value mat
- Abacus
- Number lines
- Function machine
- Multiplication grid from number grid tool
- Dartboards
- Arithmagons
- Maths equipment category in Image bank



Use activity **N3.8 Domino shapes** from ***Talking points with the Mult-e-Maths Toolbox*** to solve problems involving mental addition and subtraction of numbers.



Use activity **6 Close to one hundred**, activity **8 Largest and smallest totals** or activity **9 Total thirty-one** from ***Apex Maths 3*** to develop mental addition skills.



Use ***Perfect Times*** to practise recall of multiplication facts.

Year 3 Block A: Counting, partitioning and calculating Unit 3

Objectives for this unit	Mult-e-Maths activities
Solve one-step and two-step problems involving numbers, money or measures, including time, choosing and carrying out appropriate calculations	**UA3L5 Time problems, pages 1 and 2** Solving problems involving time
Round two-digit or three-digit numbers to the nearest 10 or 100 and give estimates for their sums and differences	**CN3S16 Rounding** Positioning 3-digit numbers on a number line and rounding them to the nearest 10 and 100
Add or subtract mentally combinations of one-digit and two-digit numbers	**CA3S4 Different addition strategies** Adding four numbers using a range of mental addition strategies **CA3S9 Multiples of 5 and 'a bit'** Expressing 2-digit numbers as multiples of 5 and 'a bit' **CA3L1 Adding multiples of 5 and 'a bit'** Splitting numbers into a multiple of 5 and 'a bit' to make addition easier **CAS3L6 Changing the order** Finding the missing number in addition problems by changing the order of the numbers **CA3L11 Adding several numbers** Adding several numbers using mental strategies
Develop and use written methods to record, support or explain addition and subtraction of two-digit and three-digit numbers	**CA3L13 Finding larger differences** Using informal written methods to support the strategy of counting on to find larger differences
Derive and recall multiplication facts for the 2, 3, 4, 5, 6 and 10 times-tables and the corresponding division facts; recognise multiples of 2, 5 or 10 up to 1000	**NF3L6 Order of multiplying** Making and describing arrays to reinforce that multiplication can be done in any order
Use practical and informal written methods to multiply and divide two-digit numbers (e.g. 13 × 3, 50 ÷ 4); round remainders up or down, depending on the context	**CA3S19 Doubling** Finding doubles of whole numbers to 20 **CA3S20 Halving** Finding halves of even numbers to 40 **CA3L18 Finding doubles** Finding doubles of numbers greater than 10

End-of-year expectations for this unit are in **bold**.

Vocabulary

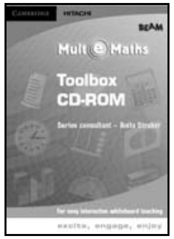
problem, solution, calculate, calculation, answer, method, explain, reasoning, pattern, predict, place value, partition, digit, ones, tens, hundreds, one-digit number, two-digit number, three-digit number, compare, order, equals (=), count on, count back, add, subtract, multiply, times, divide, share, group, sum, total, difference, plus, minus, pound (£), pence (p), note, coin, units of measurement and their abbreviations

Use ***A Maths Dictionary for Kids*** when discussing mathematical vocabulary for this unit.

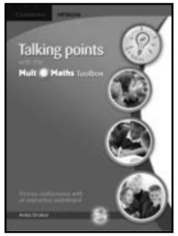
Other resources

Use the following ***Mult-e-Maths Toolbox*** tools for this unit:

- Clocks
- Measuring cylinder
- Number lines
- Function machine
- Multiplication grid from number grid tool
- Money category in Image bank

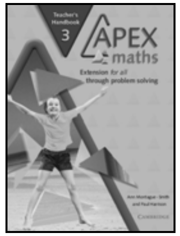


Use activity **N3.1 Counting up** from ***Talking points with the Mult-e-Maths Toolbox*** to solve problems involving mental addition and subtraction of numbers, money and measures.

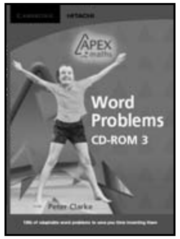


Use activity **4 The skipping rope** from ***Apex Maths 3*** to focus on solving length problems by drawing visual representations.

Use activity **13 Count down to zero** from ***Apex Maths 3*** to focus on employing subtraction strategies in the context of a game.



Use ***Apex Maths Word Problems CD-ROM 3*** as a source of appropriate one-step and two-step problems.



Use ***Perfect Times*** to practise recall of multiplication facts.

Year 3 Block B: Securing number facts, understanding shape Unit 1

Objectives for this unit	Mult-e-Maths activities
Represent the information in a puzzle or problem using numbers, images or diagrams; use these to find a solution and present it in context, where appropriate using £.p notation or units of measure	**UA3L6 Target games, pages 1 and 2** Investigating ways of choosing two, three or four numbers to make a given total
Identify patterns and relationships involving numbers or shapes, and use these to solve problems	**UA3L11 Patterns** Describing and making patterns
Derive and recall all addition and subtraction facts for each number to 20, sums and differences of multiples of 10 and number pairs that total 100	**NF3L2 Number facts to 20** Finding pairs of numbers with a given total up to 20 and identifying corresponding subtraction facts
Derive and recall multiplication facts for the 2, 3, 4, 5, 6 and 10 times-tables and the corresponding division facts; recognise multiples of 2, 5 or 10 up to 1000	**NF3S14 Multiplying and dividing by 4** Using doubling and halving to multiply and divide by 4 mentally **NF3L5 Multiples** Recognising multiples of 2, 5 and 10
Use knowledge of number operations and corresponding inverses, including doubling and halving, to estimate and check calculations	**NF3S16 Doubling and halving** Practising doubling and halving and their inverse relationship **NF3S17 Doubling multiples of 5** Identifying which multiples of 5 give specified answers when they are doubled
Relate 2-D shapes and 3-D solids to drawings of them; describe, visualise, classify, draw and make the shapes	**SH3S1 Odd shape out** Finding similarities and differences in 2-D shapes **SH3S2 Combining shapes** Combining shapes to make other shapes

End-of-year expectations for this unit are in **bold**.

Vocabulary

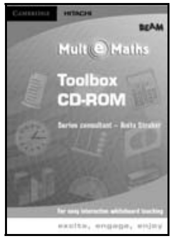
problem, solution, calculate, calculation, operation, inverse, answer, method, explain, reasoning, pattern, predict, estimate, approximate, add, subtract, multiply, divide, group, sum, total, difference, plus, minus, double, halve, multiple, product, pound (£), penny/pence (p), note, coin, units of measurement and their abbreviations, triangle, square, rectangle, quadrilateral, pentagon, hexagon, octagon, circle, semi-circle, cube, cuboid, pyramid, cone, cylinder, prism, sphere, hemisphere, face, edge, vertex/vertices, surface, solid, side, straight, curved, diagram, right-angled, line of symmetry, mirror line, reflection, symmetrical, reflective symmetry

Use ***A Maths Dictionary for Kids*** when discussing mathematical vocabulary for this unit.

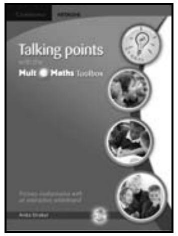
Other resources

Use the following ***Mult-e-Maths Toolbox*** tools for this unit:

- Number lines
- Function machine
- Multiplication grid from number grid tool
- Dartboards
- Game boards
- 3-D shape drawing tools
- Shape drawing tools
- Regular polygon drawing tools

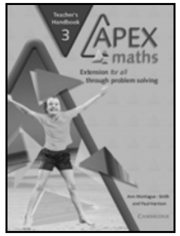


Use activity **N3.3 Pizza Pat** from ***Talking points with the Mult-e-Maths Toolbox*** to investigate delivery options using addition and subtraction facts and number patterns to inform choices.



Use activity **3 The mysterious dungeon** from ***Apex Maths 3*** to solve problems involving all four operations.

Use activity **18 A street scene** from ***Apex Maths 3*** to recognise simple patterns and relationships in the context of multiplication.

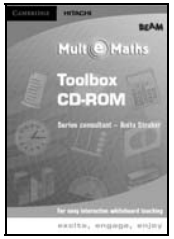
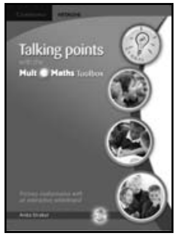
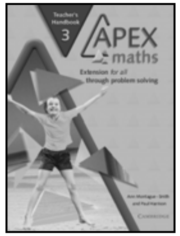
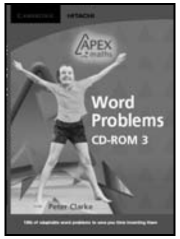


Use ***Perfect Times*** to practise recall of multiplication facts.

Year 3 Block B: Securing number facts, understanding shape Unit 2

Objectives for this unit	Mult-e-Maths activities
Solve one-step and two-step problems involving numbers, money or measures, including time, choosing and carrying out appropriate calculations	**UA3L3 Calculating with money** Adding and subtracting in the context of money
Represent the information in a puzzle or problem using numbers, images or diagrams; use these to find a solution and present it in context, where appropriate using £.p notation or units of measure	**UA3L6 Target games, page 3** Investigating ways of choosing two, three or four numbers to make a given total
Identify patterns and relationships involving numbers or shapes, and use these to solve problems	**CN3L3 Number sequences** Extending and completing sequences with step sizes less than 10 **UA3L13 Investigating symmetry** Investigating the symmetry of shapes made up of squares (rectilinear shapes)
Read and write proper fractions (e.g. $^{3}/_{7}$, $^{9}/_{10}$), interpreting the denominator as the parts of a whole and the numerator as the number of parts; identify and estimate fractions of shapes; use diagrams to compare fractions and establish equivalents	**CN3S17 Folding a square** Investigating ways of folding a square into quarters **CN3S18 Half of a square** Investigating ways of shading half of a square **CN3L11 Equal and unequal parts** Recognising what is not one half or one quarter
Derive and recall all addition and subtraction facts for each number to 20, sums and differences of multiples of 10 and number pairs that total 100	**NF3S1 Number facts to 20** Using numbers facts to 20 to complete missing number calculations and check answers **NF3S7 Adding and subtracting multiples of 10** Finding the missing numbers in additions and subtractions involving pairs of multiples of 10 or pairs of multiples of 100
Derive and recall multiplication facts for the 2, 3, 4, 5, 6 and 10 times-tables and the corresponding division facts; recognise multiples of 2, 5 or 10 up to 1000	**NF3S11 The 3 and 4 times tables** Applying knowledge of the 3 and 4 times-tables
Relate 2-D shapes and 3-D solids to drawings of them; describe, visualise, classify, draw and make the shapes	**SH3L1 Properties of 2-D shapes** Sorting and classifying 2-D shapes according to their properties **SH3L2 Properties of 3-D shapes** Describing and sorting 3-D shapes according to their properties
Draw and complete shapes with reflective symmetry; draw the reflection of a shape in a mirror line along one side	**SH3L3 Symmetry and reflection, pages 1 and 2** Identifying lines of symmetry and reflecting polygons in a mirror line along one side

End-of-year expectations for this unit are in **bold**.

<table>
<tr><th colspan="3">Vocabulary</th></tr>
<tr><td colspan="2">problem, solution, calculate, calculation, operation, inverse, answer, method, explain, reasoning, pattern, predict, estimate, approximate, add, subtract, multiply, divide, group, sum, total, difference, plus, minus, double, halve, multiple, product, pound (£), penny/pence (p), note, coin, units of measurement and their abbreviations, triangle, square, rectangle, quadrilateral, pentagon, hexagon, octagon, circle, semicircle, cube, cuboid, pyramid, cone, cylinder, prism, sphere, hemisphere, face, edge, vertex/vertices, surface, solid, side, straight, curved, diagram, right-angled, line of symmetry, mirror line, reflection, symmetrical, reflective symmetry</td><td>Use A Maths Dictionary for Kids when discussing mathematical vocabulary for this unit.
</td></tr>
<tr><th colspan="3">Other resources</th></tr>
<tr><td rowspan="2">Use the following Mult-e-Maths Toolbox tools for this unit:

• Number lines
• Function machine
• Multiplication grid from number grid tool
• Shape drawing tools
• Regular polygon drawing tools
• 3-D shape drawing tools
• Fraction labels
• Fraction wall
• Fractions of quantities
• Fractions of circles/Fractions of squares</td><td>Use activity S3.1 Peepshow 3-D from Talking points with the Mult-e-Maths Toolbox to develop familiarity with the properties of 3-D shapes.
</td><td>Use activity 19 The blacksmith from Apex Maths 3 to focus on using patterns of doubling in the context of money.
Use activity 25 Fold a shape or activity 26 Make that shape from Apex Maths 3 to investigate the effect of modifying shapes in different ways.
</td></tr>
<tr><td>Use Apex Maths Word Problems CD-ROM 3 as a source of appropriate one-step and two-step problems.
</td><td>Use Perfect Times to practise recall of multiplication facts.
</td></tr>
</table>

Year 3 Block B: Securing number facts, understanding shape Unit 3

Objectives for this unit	Mult-e-Maths activities
Solve one-step and two-step problems involving numbers, money or measures, including time, choosing and carrying out appropriate calculations	**UA3L5 Time problems, pages 3 and 4** Solving one-step and two-step word problems involving time
Represent the information in a puzzle or problem using numbers, images or diagrams; use these to find a solution and present it in context, where appropriate using £.p notation or units of measure	See reference on page 12 to *Apex Maths 3*.
Identify patterns and relationships involving numbers or shapes, and use these to solve problems	**UA3L12 New shapes from old** Investigating the shapes that can be created by joining two identical shapes, and making general statements about attributes **CN3S11 What's the sequence?** Identifying patterns in number sequences and extending the sequences
Read and write proper fractions (e.g. $^{3}/_{7}$, $^{9}/_{10}$), interpreting the denominator as the parts of a whole and the numerator as the number of parts; identify and estimate fractions of shapes; use diagrams to compare fractions and establish equivalents	**CN3S19 Fractions of shapes** Identifying unit fractions of shapes **CN3L10 Fractions in context** Identifying unit fractions of shapes and groups in an everyday context
Derive and recall all addition and subtraction facts for each number to 20, sums and differences of multiples of 10 and number pairs that total 100	**NF3S2 Matching additions and subtractions** Using knowledge of number facts to 20 to make additions and matching subtractions **NF3S8 Total 100** Identifying pairs of numbers that total 100
Derive and recall multiplication facts for the 2, 3, 4, 5, 6 and 10 times-tables and derive corresponding division facts; recognise multiples of 2, 5 or 10 up to 1000	**NF3S9 Sorting multiples** Identifying and sorting multiples of 2, 5 and 10
Use knowledge of number operations and corresponding inverses, including doubling and halving, to estimate and check calculations	**NF3S18 Halving** Finding halves and using partitioning and doubling methods to check answers
Relate 2-D shapes and 3-D solids to drawings of them; describe, visualise, classify, draw and make the shapes	**SH3S3 3-D shape properties** Identifying 3-D shapes from a view of one face and describing their properties
Use a set-square to draw right angles and to identify right angles in 2-D shapes; compare angles with a right angle; recognise that a straight line is equivalent to two right angles	**SH3S6 Right angles** Identifying right angles in 2-D shapes and pictures of everyday objects

End-of-year expectations for this unit are in **bold**.

Vocabulary

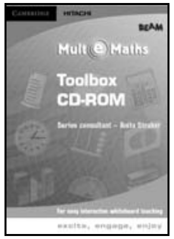
problem, solution, calculate, calculation, operation, inverse, answer, method, explain, reasoning, pattern, predict, estimate, approximate, add, subtract, multiply, divide, group, sum, total, difference, plus, minus, double, halve, multiple, product, pound (£), penny/pence (p), note, coin, units of measurement and their abbreviations, triangle, square, rectangle, quadrilateral, pentagon, hexagon, octagon, circle, semicircle, cube, cuboid, pyramid, cone, cylinder, prism, sphere, hemisphere, face, edge, vertex/vertices, surface, solid, side, straight, curved, diagram, right-angled, line of symmetry, mirror line, reflection, symmetrical, reflective symmetry

Use ***A Maths Dictionary for Kids*** when discussing mathematical vocabulary for this unit.

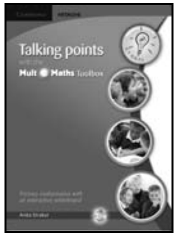
Other resources

Use the following ***Mult-e-Maths Toolbox*** tools for this unit:

- Number lines
- Function machine
- Multiplication grid from number grid tool
- Shape drawing tools
- Line drawing tools
- Regular polygon drawing tools
- 3-D shape drawing tools
- Angle tools
- Fraction labels/Fraction wall
- Fractions of quantities
- Fractions of circles/Fractions of squares

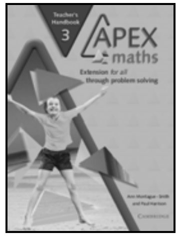


Use activity **S3.2 Properties of shapes** from ***Talking points with the Mult-e-Maths Toolbox*** to investigate similarities and differences in the properties of shapes.

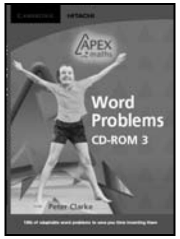


Use activity **12 Shoes, dogs and cats** from ***Apex Maths 3*** to focus on logic problems involving the addition and subtraction of small numbers.

Use activity **24 Squares and triangles** from ***Apex Maths 3*** to focus on finding different shapes by cutting off a number of right-angled triangles.



Use ***Apex Maths Word Problems CD-ROM 3*** as a source of appropriate one-step and two-step problems.



Use ***Perfect Times*** to practise recall of multiplication facts.

Year 3 Block C: Handling data and measures Unit 1

Objectives for this unit	Mult-e-Maths activities
Follow a line of enquiry by deciding what information is important; make and use lists, tables and graphs to organise and interpret the information	See reference on page 14 to activity 21 in *Apex Maths 3.*
Know the relationships between kilometres and metres, metres and centimetres, kilograms and grams, litres and millilitres; choose and use appropriate units to estimate, measure, and record measurements	See reference on page 14 to activity 28 in *Apex Maths 3*.
Read, to the nearest division and half-division, scales that are numbered or partially numbered; use the information to measure and draw to a suitable degree of accuracy	**ME3L2 Measuring lengths** Measuring lengths to the nearest half centimetre
Answer a question by collecting, organising and interpreting data; use tally charts, frequency tables, pictograms and bar charts to represent results and illustrate observations; use ICT to create a simple bar chart	**HD3L1 Organising information, page 1** Solving problems by organising and interpreting data in tally charts
Use Venn diagrams or Carroll diagrams to sort data and objects using more than one criterion	**HD3S4 Sorting numbers 1** Identifying how given numbers in a Venn diagram have been sorted **HD3S5 Sorting numbers 2** Organising and interpreting data about numbers

End-of-year expectations for this unit are in **bold**.

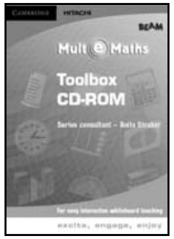
Vocabulary

problem, enquiry, solution, calculate, calculation, method, explain, reasoning, reason, predict, pattern, relationship, collect, organise, compare, sort, classify, represent, interpret, effect, information, data, survey, questionnaire, table, frequency table, block graph, bar chart, Carroll diagram, Venn diagram, axis/axes, horizontal axis, vertical axis, label, title, scale, interval, division, frequency, how often?, how frequently?, more/less, most/least, most/least popular, most/least frequent, greatest/least value, approximately, close, about the same as, ten times, hundred times, metric unit, standard unit, millimetre (mm), centimetre (cm), metre (m), kilogram (kg), gram (g), litre (l), millilitre (ml), degree Celsius (°C) ruler, tape measure, balance, scales, thermometer, capacity, weight, length, width, height, depth, temperature, time, timer, clock, second, minute, hour, day, week, month, year, before, after, interval, start time, end time, how long ago, how long will it take to …?, how long will it be to …?

Use ***A Maths Dictionary for Kids*** when discussing mathematical vocabulary for this unit.

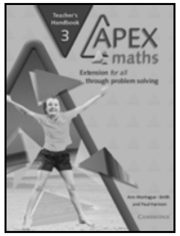
Other resources

Use the following ***Mult-e-Maths Toolbox*** tools for this unit:



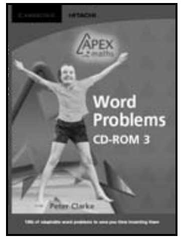
- Ruler
- Scales
- Line drawing tools
- Number lines
- Measuring cylinder
- Block graphs/Tally chart/Pictogram
- Venn diagrams/Carroll diagrams
- Mass/Volume category in Image bank

Use activity **21 Ice cream cones** from ***Apex Maths 3*** to focus on solving problems by listing possible outcomes.



Use activity **28 A weighty problem** from ***Apex Maths 3*** to focus on employing measuring skills in the context of weighing.

Use ***Apex Maths Word Problems CD-ROM 3*** as a source of appropriate one-step and two-step problems.



Year 3 Block C: Handling data and measures Unit 2

Objectives for this unit	Mult-e-Maths activities
Follow a line of enquiry by deciding what information is important; make and use lists, tables and graphs to organise and interpret the information	See reference on page 16 to *Apex Maths 3*.
Know the relationships between kilometres and metres, metres and centimetres, kilograms and grams, litres and millilitres; choose and use appropriate units to estimate, measure, and record measurements	Children could carry out practical estimating and measuring activities.
Read, to the nearest division and half-division, scales that are numbered or partially numbered; use the information to measure and draw to a suitable degree of accuracy	**ME3S4 What's the temperature** Reading a thermometer scale
Read the time on a 12-hour digital clock and to the nearest 5 minutes on an analogue clock; calculate time intervals and find start or end times for a given time interval	**ME3L4 Telling the time, page 1** Reading the time on an analogue clock and writing 12-hour digital clock times
Answer a question by collecting, organising and interpreting data; use tally charts, frequency tables, pictograms and bar charts to represent results and illustrate observations; use ICT to create a simple bar chart	**HD3L1 Organising information, pages 2 and 3** Solving problems by organising and interpreting data in pictograms and bar charts
Use Venn diagrams or Carroll diagrams to sort data and objects using more than one criterion	**HD3S2 Sorting 2-D shapes 1** Sorting 2-D shapes according to their properties **HD3S3 Sorting 2-D shapes 2** Sorting 2-D shapes into Carroll diagrams according to their properties

End-of-year expectations for this unit are in **bold**.

Vocabulary

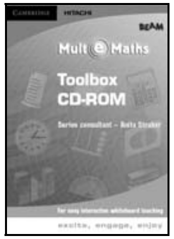
problem, enquiry, solution, calculate, calculation, method, explain, reasoning, reason, predict, pattern, relationship, collect, organise, compare, sort, classify, represent, interpret, effect, information, data, survey, questionnaire, table, frequency table, block graph, bar chart, Carroll diagram, Venn diagram, axis/axes, horizontal axis, vertical axis, label, title, scale, interval, division, frequency, how often?, how frequently?, more/less, most/least, most/least popular, most/least frequent, greatest/least value, approximately, close, about the same as, ten times, hundred times, metric unit, standard unit, millimetre (mm), centimetre (cm), metre (m), kilogram (kg), gram (g), litre (l), millilitre (ml), degree Celsius (°C), ruler, tape measure, balance, scales, thermometer, capacity, weight, length, width, height, depth, temperature, time, timer, clock, second, minute, hour, day, week, month, year, before, after, interval, start time, end time, how long ago, how long will it take to …?, how long will it be to …?

Use ***A Maths Dictionary for Kids*** when discussing mathematical vocabulary for this unit.

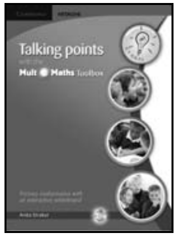
Other resources

Use the following ***Mult-e-Maths Toolbox*** tools for this unit:

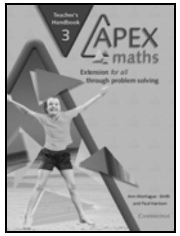
- Ruler
- Scales
- Line drawing tools
- Number lines
- Measuring cylinder
- Clocks
- Block graphs/Tally chart/Pictogram
- Venn diagrams/Carroll diagrams
- Mass/Volume category in Image bank



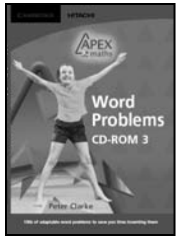
Use activity **D3.1 Pictograms and tables** from ***Talking points with the Mult-e-Maths Toolbox*** to examine more examples of data.



Use activity **30 Going to the cinema** from ***Apex Maths 3*** to focus on sifting data in a timetable.



Use ***Apex Maths Word Problems CD-ROM 3*** as a source of appropriate one-step and two-step problems.



Year 3 Block C: Handling data and measures Unit 3

Objectives for this unit	Mult-e-Maths activities
Follow a line of enquiry by deciding what information is important; make and use lists, tables and graphs to organise and interpret the information	See reference on page 18 to *Apex Maths 3.*
Describe and explain methods, choices and solutions to puzzles and problems, orally and in writing, using pictures and diagrams	**UA3L7 Using diagrams to solve problems, pages 2 and 3** Using Venn and Carroll diagrams to sort numbers according to one criterion
Know the relationships between kilometres and metres, metres and centimetres, kilograms and grams, litres and millilitres; choose and use appropriate units to estimate, measure, and record measurements	**ME3L1 Measuring mass** Measuring masses in kilograms, and in kilograms and grams, and using the masses to solve problems
Read, to the nearest division and half-division, scales that are numbered or partially numbered; use the information to measure and draw to a suitable degree of accuracy	**ME3S2 What's the length?** Estimating, measuring and comparing lengths
Answer a question by collecting, organising and interpreting data; use tally charts, frequency tables, pictograms and bar charts to represent results and illustrate observations; use ICT to create a simple bar chart	**HD3S1 Interpreting bar charts** Interpreting a bar chart in which each interval represents two **HD3L1 Organising information, page 4** Solving problems by organising and interpreting data in bar charts

End-of-year expectations for this unit are in **bold**.

Vocabulary

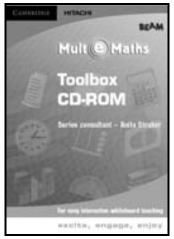
problem, enquiry, solution, calculate, calculation, method, explain, reasoning, reason, predict, pattern, relationship, collect, organise, compare, sort, classify, represent, interpret, effect, information, data, survey, questionnaire, table, frequency table, block graph, bar chart, Carroll diagram, Venn diagram, axis/axes, horizontal axis, vertical axis, label, title, scale, interval, division, frequency, how often?, how frequently?, more/less, most/least, most/least popular, most/least frequent, greatest/least value, approximately, close, about the same as, ten times, hundred times, metric unit, standard unit, millimetre (mm), centimetre (cm), metre (m), kilogram (kg), gram (g), litre (l), millilitre (ml), degree Celsius (°C), ruler, tape measure, balance, scales, thermometer, capacity, weight, length, width, height, depth, temperature, time, timer, clock, second, minute, hour, day, week, month, year, before, after, interval, start time, end time, how long ago, how long will it take to …?, how long will it be to …?

Use ***A Maths Dictionary for Kids*** when discussing mathematical vocabulary for this unit.

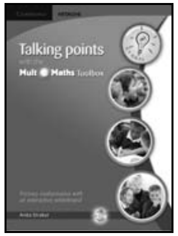
Other resources

Use the following ***Mult-e-Maths Toolbox*** tools for this unit:

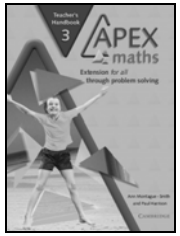
- Ruler
- Scales
- Line drawing tools
- Number lines
- Measuring cylinder
- Block graphs/Tally chart/Pictogram
- Venn diagrams/Carroll diagrams
- Mass/Volume category in Image bank



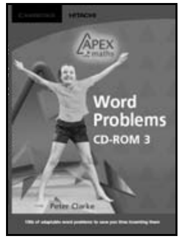
Use activity **N3.1 Counting up** from ***Talking points with the Mult-e-Maths Toolbox*** to solve problems involving mental addition and subtraction of money.



Use activity **15 A pocketful of money** from ***Apex Maths 3*** to focus on working systematically in the context of money.



Use ***Apex Maths Word Problems CD-ROM 3*** as a source of appropriate one-step and two-step problems.



Year 3 Block D: Calculating, measuring and understanding shape Unit 1

Objectives for this unit	Mult-e-Maths activities
Solve one-step and two-step problems involving numbers, money or measures, including time, choosing and carrying out appropriate calculations	**UA3L4 Money problems, page 1** Working out totals, change, and which coins to use to pay for items
Add or subtract mentally combinations of one-digit and two-digit numbers	**CA3S1 Adding several numbers** Considering different methods for adding several one-digit numbers **CA3S5 Adding strings of numbers** Adding 3 or 4 numbers by finding pairs that total a multiple of 10 **CA3S12 Near doubles** Using known doubles to solve near doubles **CA3L7 Counting on from the larger number** Adding by putting the larger number first and counting on **CA3L10 Number facts and place value** Using known number facts and place value to help mental calculation
Find unit fractions of numbers and quantities (e.g. $^1/_2$, $^1/_3$, $^1/_4$ and $^1/_6$ of 12 litres)	**CA3L24 Finding the whole** Working out the whole of a quantity given a half or a quarter, or another simple unit fraction
Read and record the vocabulary of position, direction and movement, using the four compass directions to describe movement about a grid	**SH3S5 Using coordinates** Using simple coordinates to identify the positions of squares on a grid
Know the relationships between kilometres and metres, metres and centimetres, kilograms and grams, litres and millilitres; choose and use appropriate units to estimate, measure, and record measurements	**ME3S1 How heavy?** Estimating masses, reading scales and calculating combined masses
Read, to the nearest division and half-division, scales that are numbered or partially numbered; use the information to measure and draw to a suitable degree of accuracy	**ME3L3 Finding capacities** Measuring capacities in litres and in millilitres, and solving problems involving capacities
Read the time on a 12-hour digital clock and to the nearest 5 minutes on an analogue clock; calculate time intervals and find start or end times for a given time interval	**ME3L4 Telling the time, page 2** Reading the time on an analogue clock and writing 12-hour digital clock times

End-of-year expectations for this unit are in **bold**.

Vocabulary

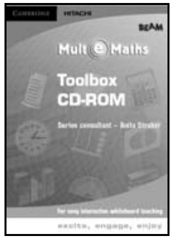
problem, solution, puzzle, pattern, methods, sign, operation, symbol, number sentence, equation, mental calculation, written calculation, informal method, jottings, diagrams, pictures, images, add, plus, sum, total, subtract, take away, minus, difference, double, halve, inverse, multiply, times, multiplied by, product, multiple, share, share equally, divide, divided by, divided into, left, left over, remainder, fraction, part, equal parts, one whole, one half, one third, one quarter, one fifth, one sixth, one tenth, grid, row, column, horizontal, vertical, diagonal, higher, lower, map, plan, compass point, north (N), south (S), east (E), west (W), turn, whole turn, half turn, quarter turn, clockwise, anticlockwise, right, left, up, down, ascend, descend, forwards, backwards, sideways, across, measuring scale, interval, division, unit, standard unit, approximately, close, about the same as, ten times, hundred times, measure, estimate, unit, length, distance, weight, capacity, ruler, tape measure, balance, scales, measuring cylinder/jug, angle, right angle, set -square, units of measurement and abbreviations: metre (m), centimetre (cm), millimetre (mm), kilogram (kg), gram (g), litre (l), millilitre (ml), time, clock, watch, hour (h), minute (min), second (s)

Use ***A Maths Dictionary for Kids*** when discussing mathematical vocabulary for this unit.

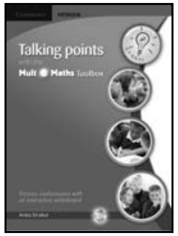
Other resources

Use the following ***Mult-e-Maths Toolbox*** tools for this unit:

- Number lines
- Clocks
- Measuring cylinder
- Scales
- Money/Mass/Volume category in Image bank
- Fractions of quantities
- Fraction labels/Fraction wall
- Co-ordinate and background grids

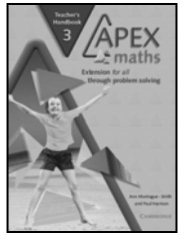


Use activity **N3.2 Cake boxes** from ***Talking points with the Mult-e-Maths Toolbox*** to solve problems involving mental addition and subtraction of money.

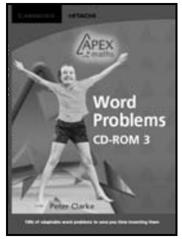


Use activity **27 Jamie's walk** from ***Apex Maths 3*** to focus on developing descriptions of position and direction.

Use activity **20 Money box** from ***Apex Maths 3*** to focus on solving money problems involving fractions.



Use ***Apex Maths Word Problems CD-ROM 3*** as a source of appropriate one-step and two-step problems.



Year 3 Block D: Counting, measuring and understanding shape Unit 2

Objectives for this unit	Mult-e-Maths activities
Represent the information in a puzzle or problem using numbers, images or diagrams; use these to find a solution and present it in context, where appropriate using £.p notation or units of measure	**UA3L4 Money problems, page 2** Working out totals, change, and which coins to use to pay for items
Add or subtract mentally combinations of one-digit and two-digit numbers	**CA3S3 Partitioning** Finding the answers to additions where partitioning into tens and units might be a helpful strategy **CA3S6 Using tens and units** Adding pairs of 2-digit numbers by partitioning into tens and units **CA3S10 Adding and adjusting** Adding near multiples of 10 to 2-digit numbers **CA3S11 Subtracting and adjusting** Subtracting near multiples of 10 from 2-digit numbers **CA3S13 Adding and subtracting 2-digit numbers** Adding and subtracting pairs of 2-digit numbers mentally **CA3S14 Using known number facts** Finding the missing numbers in additions and subtractions and using one number fact to solve other additions and subtractions **CA3S16 What's my number?** Identifying a 2-digit number given the total when a number is added to it and the difference when a number is subtracted from it **CA3L2 Partitioning and addition** Partitioning numbers into tens and units to help with addition **CA3L8 Near doubles** Using near doubles when adding **CA3L9 Similar calculations** Identifying patterns of similar calculations and using them to solve other additions and subtractions
Develop and use written methods to record, support or explain addition and subtraction of two-digit and three-digit numbers	**CA3S17 Counting up** Solving subtractions by counting up **CA3L12 Adding larger numbers** Adding larger numbers by splitting them into their place value parts and with the aid of jottings
Use practical and informal written methods to multiply and divide two-digit numbers (e.g. 13 × 3, 50 ÷ 4); round remainders up or down, depending on the context	**CA3S22 Sharing and grouping** Using sharing and grouping methods to solve divisions **CA3L20 Remainders** Finding remainders using visual representations and knowledge of times-tables
Find unit fractions of numbers and quantities (e.g. $^1/_2$, $^1/_3$, $^1/_4$ and $^1/_6$ of 12 litres)	**CA3L25 Fractions of a quantity** Recognising unit fractions of a quantity and simple fractions that are several parts of a quantity
Draw and complete shapes with reflective symmetry; draw the reflection of a shape in a mirror line along one side	**SH3L3 Symmetry and reflection, page 3** Identifying lines of symmetry and reflecting polygons in a mirror line along one side
Read and record the vocabulary of position, direction and movement, using the four compass directions to describe movement about a grid	**SH3S4 Directions and coordinates** Describing squares on a grid using compass directions and coordinates **SH3L4 Giving positions** Giving instructions and finding positions on a grid of squares
Use a set-square to draw right angles and to identify right angles in 2-D shapes; compare angles with a right angle; recognise that a straight line is equivalent to two right angles	**SH3L6 Right angles** Identifying right angles, and saying whether a given angle is greater than or less than a right angle
Know the relationships between kilometres and metres, metres and centimetres, kilograms and grams, litres and millilitres; choose and use appropriate units to estimate, measure, and record measurements	You could use the *Mult-e-Maths Toolbox* to create a matching game for relationships between units.

End-of-year expectations for this unit are in **bold**.

Vocabulary

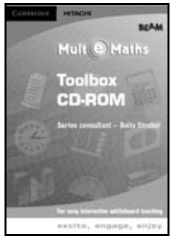
problem, solution, puzzle, pattern, methods, sign, operation, symbol, number sentence, equation, mental calculation, written calculation, informal method, jottings, diagrams, pictures, images, add, plus, sum, total, subtract, take away, minus, difference, double, halve, inverse, multiply, times, multiplied by, product, multiple, share, share equally, divide, divided by, divided into, left, left over, remainder, fraction, part, equal parts, one whole, one half, one third, one quarter, one fifth, one sixth, one tenth, grid, row, column, horizontal, vertical, diagonal, higher, lower, map, plan, compass point, north (N), south (S), east (E), west (W), turn, whole turn, half turn, quarter turn, clockwise, anticlockwise, right, left, up, down, ascend, descend, forwards, backwards, sideways, across, measuring scale, interval, division, unit, standard unit, approximately, close, about the same as, ten times, hundred times, multiple, measure, estimate, unit, length, distance, weight, capacity, ruler, tape measure, balance, scales, measuring cylinder/jug, angle, right angle, set square, units of measurement and abbreviations: metre (m), centimetre (cm), millimetre (mm), kilogram (kg), gram (g), litre (l), millilitre (ml), time, clock, watch, hours (h), minutes (min), seconds (s)

Use ***A Maths Dictionary for Kids*** when discussing mathematical vocabulary for this unit.

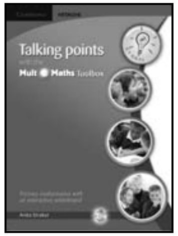
Other resources

Use the following ***Mult-e-Maths Toolbox*** tools for this unit:

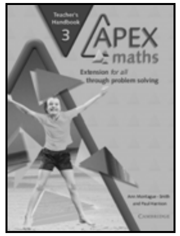
- Number lines
- Function machine
- Multiplication grid from number grid tool
- Fractions of quantities
- Fraction labels/Fraction wall
- Co-ordinate and background grids
- Shape drawing tools/Regular polygon drawing tools
- Angle tools
- Line drawing tools
- Measuring cylinder
- Scales
- Mass/Volume category in Image bank



Use activity **N3.4 Make 50** from ***Talking points with the Mult-e-Maths Toolbox*** to solve problems involving mental addition and subtraction of numbers.



Use activity **10 Telephone numbers** or activity **11 Make a number** from ***Apex Maths 3*** to focus on investigating mental addition and subtraction calculations.



Year 3 Block D: Counting, measuring and understanding shape Unit 3

Objectives for this unit	Mult-e-Maths activities
Solve one-step and two-step problems involving numbers, money or measures, including time, choosing and carrying out appropriate calculations	**UA3L4 Money problems, page 3** Working out totals, change, and which coins to use to pay for items
Use knowledge of number operations and corresponding inverses, including doubling and halving, to estimate and check calculations	**NF3L7 Estimating and checking** Estimating, calculating and checking answers to additions and subtractions of 3-digit numbers **NF3L8 Using inverse operations** Using subtraction to find the missing numbers in addition problems
Develop and use written methods to record, support or explain addition and subtraction of two-digit and three-digit numbers	**CA3L14 Adding in columns** Developing the use of the expanded written method for TU + TU, HTU + TU and HTU + HTU **CA3L15 Changing a ten, page 2** Developing use of column subtraction for TU – TU
Use practical and informal written methods to multiply and divide two-digit numbers (e.g. 13 × 3, 50 ÷ 4); round remainders up or down, depending on the context	**CA3L21 Rounding after division** Deciding whether to round up or down after division
Understand that division is the inverse of multiplication and vice versa; use this to derive and record related multiplication and division number sentences	See reference on page 24 to *Apex Maths 3*.
Use a set-square to draw right angles and to identify right angles in 2-D shapes; compare angles with a right angle; recognise that a straight line is equivalent to two right angles	**SH3L5 Right angled turns** Making right-angled turns on a 4-point compass and on a clock
Read, to the nearest division and half-division, scales that are numbered or partially numbered; use the information to measure and draw to a suitable degree of accuracy	**ME3S3 How much water?** Reading from scales on measuring cylinders
Read the time on a 12-hour digital clock and to the nearest 5 minutes on an analogue clock; calculate time intervals and find start or end times for a given time interval	**ME3S5 Telling the time** Reading the time on an analogue or digital clock, and making the matching time on the other type of clock **ME3S6 Time intervals** Solving problems involving digital times and time intervals

End-of-year expectations for this unit are in **bold**.

Vocabulary

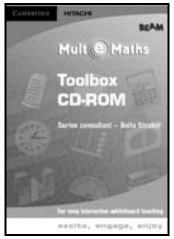
problem, solution, puzzle, pattern, methods, sign, operation, symbol, number sentence, equation, mental calculation, written calculation, informal method, jottings, diagrams, pictures, images, add, plus, sum, total, subtract, take away, minus, difference, double, halve, inverse, multiply, times, multiplied by, product, multiple, share, share equally, divide, divided by, divided into, left, left over, remainder, fraction, part, equal parts, one whole, one half, one third, one quarter, one fifth, one sixth, one tenth, grid, row, column, horizontal, vertical, diagonal, higher, lower, map, plan, compass point, north (N), south (S), east (E), west (W), turn, whole turn, half turn, quarter turn, clockwise, anticlockwise, right, left, up, down, ascend, descend, forwards, backwards, sideways, across, measuring scale, interval, division, unit, standard unit, approximately, close, about the same as, ten times, hundred times, multiple, measure, estimate, unit, length, distance, weight, capacity, ruler, tape measure, balance, scales, measuring cylinder/jug, angle, right angle, set square, units of measurement and abbreviations: metre (m), centimetre (cm), millimetre (mm), kilogram (kg), gram (g), litre (l), millilitre (ml), time, clock, watch, hours (h), minutes (min), seconds (s)

Use ***A Maths Dictionary for Kids*** when discussing mathematical vocabulary for this unit.

Other resources

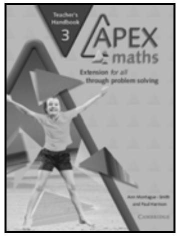
Use the following ***Mult-e-Maths Toolbox*** tools for this unit:

- Money category in Image bank
- Number lines
- Function machine
- Multiplication grid from number grid tool
- Angle tools
- Line drawing tools
- Measuring cylinder
- Scales
- Clocks

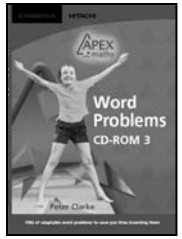


Use activity **16 Mystery numbers** from ***Apex Maths 3*** to focus on using number lines for division.

Use activity **17 Calculator magic** from ***Apex Maths 3*** to develop a variety of calculation strategies to reach a given number.



Use ***Apex Maths Word Problems CD-ROM 3*** as a source of appropriate one-step and two-step problems.

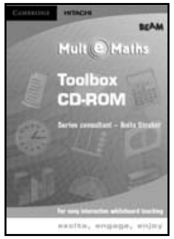
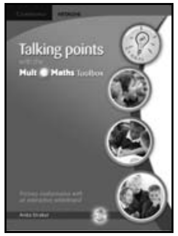
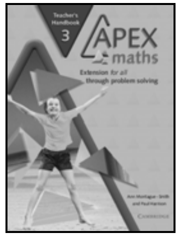


Year 3 Block E: Securing number facts, relationships and calculating Unit 1

Objectives for this unit	Mult-e-Maths activities
Follow a line of enquiry by deciding what information is important; make and use lists, tables and graphs to organise and interpret the information	**UA3L8 Partitioning problems** Investigating ways of partitioning a number up to 30, given rules about the relationships between the parts
Identify patterns and relationships involving numbers or shapes, and use these to solve problems	**UA3L7 Using diagrams to solve problems, page 1** Counting on and back in steps of 2, 3, 4, and 5 from any number **CN3L7 Odd and even numbers** Counting in 2s and identifying odd and even numbers
Derive and recall all addition and subtraction facts for each number to 20, sums and differences of multiples of 10 and number pairs that total 100	**NF3S3 Differences** Identifying pairs of numbers with a given difference
Derive and recall multiplication facts for the 2, 3, 4, 5, 6 and 10 times-tables and the corresponding division facts; recognise multiples of 2, 5 or 10 up to 1000	**NF3S15 Using multiplication and division facts** Using knowledge of multiplication and division facts to solve number puzzles
Use practical and informal written methods to multiply and divide two-digit numbers (e.g. 13 × 3, 50 ÷ 4); round remainders up or down, depending on the context	**CA3L19 Multiplying 2-digit numbers** Multiplying 2-digit numbers by splitting them into their place value components
Find unit fractions of numbers and quantities (e.g. $^1/_2$, $^1/_3$, $^1/_4$ and $^1/_6$ of 12 litres)	**CA3S23 Fractions of amounts** Finding unit fractions of amounts of objects

End-of-year expectations for this unit are in **bold**.

<table>
<tr><th colspan="2">Vocabulary</th></tr>
<tr><td>problem, solution, calculate, calculation, inverse, answer, method, explain, predict, estimate, reason, pattern, relationship, compare, order, information, test, list, table, diagram, place value, partition, ones, tens, hundreds, one-digit number, two-digit number, three-digit number, sign, equals (=), operation, symbol, number sentence, equation, mental calculation, written calculation, informal method, jottings, number line, count on, count back, add, plus, sum, total, subtract, take away, minus, difference, double, halve, inverse, multiply, times, multiplied by, product, multiple, share, share equally, divide, divided by, divided into, left, left over, remainder, round up, round down, fraction, part, equal parts, one whole, parts of a whole, number of parts, one half, one third, one quarter, one fifth, one sixth, one tenth, two thirds, three quarters, three fifths, unit fraction</td><td>Use A Maths Dictionary for Kids when discussing mathematical vocabulary for this unit.
</td></tr>
</table>

<table>
<tr><th colspan="3">Other resources</th></tr>
<tr><td rowspan="2">Use the following Mult-e-Maths Toolbox tools for this unit:
• Number lines
• Function machine
• Multiplication grid from number grid tool
• Abacus
• Fraction labels
• Fraction wall
• Fraction of quantities
• Fraction of squares
• Fraction of circles
</td><td>Use activity N3.6 Use only these from Talking points with the Mult-e-Maths Toolbox to identify patterns and use them to solve problems involving addition and subtraction.
</td><td>Use activity 29 Tennis matches from Apex Maths 3 to focus on solving problems by listing possible outcomes, sorting data and creating tables.
</td></tr>
<tr><td colspan="2">Use Perfect Times to practise recall of multiplication facts.
</td></tr>
</table>

Year 3 Block E: Securing number facts, relationships and calculating Unit 2

Objectives for this unit	Mult-e-Maths activities
Solve one-step and two-step problems involving numbers, money or measures, including time, choosing and carrying out appropriate calculations	See reference on page 28 to *Apex Maths Word Problems*.
Read and write proper fractions (e.g. $^{3}/_{7}$, $^{9}/_{10}$), interpreting the denominator as the parts of a whole and the numerator as the number of parts; identify and estimate fractions of shapes; use diagrams to compare fractions and establish equivalents	**CN3L12 Fraction walls** Describing the lengths of rods using fraction vocabulary **CN3L13 Equal fractions** Investigating simple equivalent fractions
Derive and recall multiplication facts for the 2, 3, 4, 5, 6 and 10 times-tables and the corresponding division facts; recognise multiples of 2, 5 or 10 up to 1000	**NF3S12 The 6 times-tables** Using multiplication facts for 2 and 4 to multiply by 6
Multiply one-digit and two-digit numbers by 10 or 100, and describe the effect	**CA3S18 Multiplying by 10 and 100** Using knowledge of multiplying by 10 and 100
Use practical and informal written methods to multiply and divide two-digit numbers (e.g. 13 × 3, 50 ÷ 4); round remainders up or down, depending on the context	**CA3S21 Multiplying multiples of 10** Using knowledge of times-table facts to multiply multiples of 10
Understand that division is the inverse of multiplication and vice versa; use this to derive and record related multiplication and division number sentences	**CA3L23 Getting back to the start number** Dividing to reverse the effect of multiplying and vice versa
Find unit fractions of numbers and quantities (e.g. $^{1}/_{2}$, $^{1}/_{3}$, $^{1}/_{4}$ and $^{1}/_{6}$ of 12 litres)	**CA3L26 Comparing fractions, page 1** Comparing simple fractions of quantities

End-of-year expectations for this unit are in **bold**.

Vocabulary

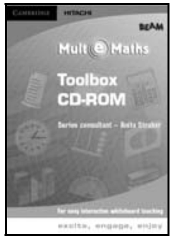
problem, solution, calculate, calculation, inverse, answer, method, explain, predict, estimate, reason, pattern, relationship, compare, order, information, test, list, table, diagram, place value, partition, ones, tens, hundreds, one-digit number, two-digit number, three-digit number, sign, equals (=), operation, symbol, number sentence, equation, mental calculation, written calculation, informal method, jottings, number line, count on, count back, add, plus, sum, total, subtract, take away, minus, difference, double, halve, inverse, multiply, times, multiplied by, product, multiple, share, share equally, divide, divided by, divided into, left, left over, remainder, round up, round down, fraction, part, equal parts, one whole, parts of a whole, number of parts, one half, one third, one quarter, one fifth, one sixth, one tenth, two thirds, three quarters, three fifths, unit fraction

Use ***A Maths Dictionary for Kids*** when discussing mathematical vocabulary for this unit.

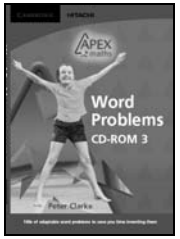
Other resources

Use the following ***Mult-e-Maths Toolbox*** tools for this unit:

- Abacus
- Number lines
- Function machine
- Money category in Image bank
- Multiplication grid from number grid tool
- Fraction labels
- Fraction wall
- Fraction of quantities
- Fraction of squares
- Fraction of circles

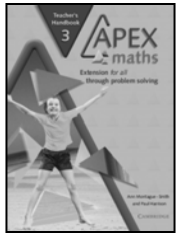


Use ***Apex Maths Word Problems CD-ROM 3*** as a source of appropriate one-step and two-step problems.



Use activity **5 The fruit bowl** from ***Apex Maths 3*** to investigate quantities expressed as numbers and fractions.

Use activity **14 Four in a row** from ***Apex Maths 3*** to develop strategies based on recognising multiples of numbers.



Use ***Perfect Times*** to practise recall of multiplication facts.

Year 3 Block E: Securing number facts, relationships and calculating Unit 3

Objectives for this unit	Mult-e-Maths activities
Solve one-step and two-step problems involving numbers, money or measures, including time, choosing and carrying out appropriate calculations	See reference on page 30 to *Apex Maths Word Problems CD-ROM 3.*
Follow a line of enquiry by deciding what information is important; make and use lists, tables and graphs to organise and interpret the information	See reference on page 30 to *Apex Maths 3.*
Identify patterns and relationships involving numbers or shapes, and use these to solve problems	**CN3S12 Odd or even?** Sorting odd and even numbers **UA3L10 Adding odds and evens** Investigating odd and even totals
Partition three-digit numbers into multiples of 100, 10 and 1 in different ways	**CN3L2 1, 10 and 100 more or less** Recognising the effects on a number's digits when it is reduced or increased by 1, 10 or 100 **CA3L15 Changing a ten, page 1** Developing use of column subtraction for TU – TU
Read and write proper fractions (e.g. $^{3}/_{7}$, $^{9}/_{10}$), interpreting the denominator as the parts of a whole and the numerator as the number of parts; identify and estimate fractions of shapes; use diagrams to compare fractions and establish equivalents	**CN3S20 Simple equivalent fractions** Using fractions of shapes to identify equivalent fractions **CN3L14 Estimating a fraction** Estimating simple fractions of shapes and quantities
Derive and recall multiplication facts for the 2, 3, 4, 5, 6 and 10 times-tables and the corresponding division facts; recognise multiples of 2, 5 or 10 up to 1000	**NF3S13 Dividing by 2, 3, 4, 5 and 10** Using knowledge of times-tables facts to create divisions
Develop and use written methods to record, support or explain addition and subtraction of two-digit and three-digit numbers	**CA3L16 Changing a hundred** Developing use of column subtraction for HTU – TU and HTU – HTU
Use practical and informal written methods to multiply and divide two-digit numbers (e.g. 13 × 3, 50 ÷ 4); round remainders up or down, depending on the context	**CA3L22 Dividing bigger numbers** Beginning to use a 'chunking' method to solve divisions
Find unit fractions of numbers and quantities (e.g. $^{1}/_{2}$, $^{1}/_{3}$, $^{1}/_{4}$ and $^{1}/_{6}$ of 12 litres)	**CA3L26 Comparing fractions, pages 2 and 3** Comparing simple fractions of quantities

End-of-year expectations for this unit are in **bold**.

Vocabulary

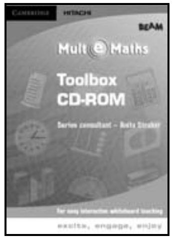
problem, solution, calculate, calculation, inverse, answer, method, explain, predict, estimate, reason, pattern, relationship, compare, order, information, test, list, table, diagram, place value, partition, ones, tens, hundreds, one-digit number, two-digit number, three-digit number, sign, equals (=), operation, symbol, number sentence, equation, mental calculation, written calculation, informal method, jottings, number line, count on, count back, add, plus, sum, total, subtract, take away, minus, difference, double, halve, inverse, multiply, times, multiplied by, product, multiple, share, share equally, divide, divided by, divided into, left, left over, remainder, round up, round down, fraction, part, equal parts, one whole, parts of a whole, number of parts, one half, one third, one quarter, one fifth, one sixth, one tenth, two thirds, three quarters, three fifths, unit fraction

Use ***A Maths Dictionary for Kids*** when discussing mathematical vocabulary for this unit.

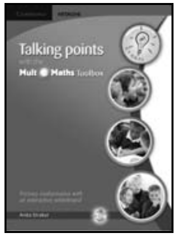
Other resources

Use the following ***Mult-e-Maths Toolbox*** tools for this unit:

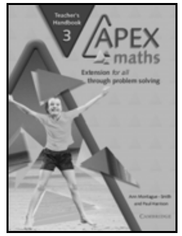
- Money category in Image bank
- Abacus
- Place value chart
- Place value mat
- Fraction labels
- Fractions wall
- Number lines
- Fraction of quantities
- Fraction of squares
- Fraction of circles
- Equivalence machine
- Multiplication grid from number grid tool
- Function machine



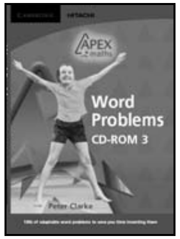
Use activity **N3.7 Place value 2** from ***Talking points with the Mult-e-Maths Toolbox*** to investigate the partitioning of three-digit numbers in order to create a number closest to a specific total.



Use activity **22 Pick up sticks** or activity **23 Sticky squares** from ***Apex Maths 3*** to focus on identifying number patterns in growing square and triangular patterns.



Use ***Apex Maths Word Problems CD-ROM 3*** as a source of appropriate one-step and two-step problems.



Use ***Perfect Times*** to practise recall of multiplication facts.