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KS2 Measures, Shape, Space and Handling Data Teacher's Notes

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Introduction to Mult-e-Maths teacher's notes

Introduction

All activities in the Mult-e-Maths Strand CD-ROMs are accompanied by teacher's notes, which are included on the CD-ROMS as PDFs. This pre-printed pack is designed to save you printing time, providing a ready-to-use resource that you can file in a ring-binder alongside your maths planning.

The pack consists of four parts, one for each of Years 3, 4, 5 and 6. In each part there are:

- a list of contents, including the titles of the on-screen activities and brief descriptions of them;
- a planning grid linking activities to objectives in the National Numeracy Strategy *Framework for teaching mathematics* (see below for further details);
- teacher's notes for starters and then lessons (see overleaf for further details).

Planning

The **planning grids** included in this pack are designed to help you to incorporate the Mult-e-Maths Strands into your planning.

The left-hand column of each grid shows NNS *Framework* objectives for the appropriate strand and year. They appear in the same order as in the *Framework*.

The right-hand column shows the starter and lesson activities that match each objective. (Lessons are shaded to enable you to distinguish between starters and lessons more easily.)

Note: The grids show the main learning objective for each activity, whereas the teacher's notes also detail any linked objectives.

The Mult-e-Maths Strands do not cover all of the NNS *Framework* objectives, but are designed to support other methods of effective teaching, including practical and pencil and paper work.

Medium term plans can be downloaded from the Mult-e-Maths website. These show how each Mult-e-Maths Strand activity can be mapped into your termly planning. They are provided in Microsoft Word ® format to enable you to adapt them to your own school plans.

Clicking on the Mult-e-Maths icon on any screen of a Mult-e-Maths Strand will take you directly to the website at:



www.cambridge-hitachi.com/multemaths/

The medium term plans can be accessed from the 'Ideas and inspiration' section.

Year 3 Framework objectives (continued)	Mult-e-Maths Starters and Lessons (continued)
(p33) Add by partitioning into tens and units, then recombining	AS3S6 Partitioning Finding the answers to additions where partitioning into tens and units might be a useful strategy
	AS3S13 Using tens and units Adding pairs of 2-digit numbers by partitioning into tens and units
	AS3L3 Partitioning and addition Partitioning numbers into tens and units to help with addition
	AS3L16 Adding larger numbers Adding larger numbers by splitting them into their place value parts and with the aid of jottings
(p33) Find a small difference by counting up from the smaller to	AS3S12 Counting up Solving subtractions by counting up
the larger number	A53L9 Small differences Using counting up from the smaller number to solve subtractions and deciding when this method is most appropriate
	AS3L10 Changing the order Finding the missing number in addition problems by changing the order of the numbers
(p33) Identify near doubles, using doubles already known	AS3S21 Near doubles Using known doubles to solve near doubles
	AS3L12 Near doubles Using near doubles when adding
(p35) Add and subtract mentally a 'near multiple of	AS3S19 Adding and adjusting Adding 9, 19, 29,99 to 2-digit numbers
10' to or from a 2-digit number by adding or subtracting 10, 20, 30 and	AS3S20 Subtracting and adjusting Subtracting 9, 19, 29,99 from 2-digit numbers
adjusting	AS3L8 Using near multiples of 10 Adding and subtracting mentally using near multiples of 10 and adjusting
(p35) Use patterns of similar calculations	A5358 Using patterns Spotting inconsistencies in patterns of calculations and using the patterns to find the answers to other calculations
	AS3L14 Similar calculations Identifying patterns of similar calculations and using them to solve other additions and subtractions
(p35) Say or write a subtraction statement corresponding to a	AS3S3 Matching additions and subtractions Using knowledge of number facts to 20 to make additions and matching subtractions
given addition statement, and vice versa	AS3L6 Number facts to 20 Finding pairs of numbers with a given total up to 20 and identifying corresponding subtraction facts
(pp37, 39) Use known number facts and place value to	AS3S22 Add and subtract mentally Adding and subtracting mentally without crossing the tens boundary
add/subtract mentally	A53524 Using known number facts Finding the missing numbers in additions and subtractions and using one number fact to solve other additions and subtractions
	AS3L18 Number facts and place value

Planning grid for Addition and Subtraction Year 3

Year 3 sample plan: Autumn term, part 1

EVERY DAY: Practise and develop oral and mental skills (e.g. or Read and while whole muthers up to 1000. Addividential 1, 10 and 100 to/form any whole number. Court on/back in 10s and 100s form any 2-or 3-digit number. Recall addition and subtraction facts for each number to at least 10. Recall addition and subtraction facts for each number to at least 10. Recall addition and subtraction facts for each number to at least 10.			ers up to 1000, torfrom any whole number, 00s from any 2- or 3-digit num ion facts for each number to a ars that total 20.	ber. t least 10.	uring, mental strategies, rapid recail of +, -, x and + facts). Denie doubles of hubie numbers to 15, and concesponding halves. Recail multiplication facts for 5 times-table, and derive division facts. Recail multiplication facts for 10 times-table, and derive division facts. Recail multiplication facts for 2 times-table, and derive division facts.		
Unit	Days	Pages	Tepic	Objecti	ives: children will be taught to	Mult-e-Maths starter reference	Mult-e-Maths lesson reference
1	3	8–19	Place value, ordening, estimating, rounding	Read and figures an Know wha 3-digit nur multiple of Read and	write whole numbers to 1000 in d words, et each digit represents, and partition mbers into a multiple of 100, a f 10, and onen. (begin to write the vocabulary of	N5354 N53512 N5353	NS3L2 NS3L3
				Estimate s	up to 100 objects.	N\$351	NS3L1
		76-77	Reading numbers from scales	Read scal	ies to the nearest division.	553513	
2-3	10	24-29	Understanding + and -	Extend un addition al Read and Use +, - a Recognise	dentanding of the operations of nd subtraction. begin to write related vocabulary. and = signs. e that addition can be done in any		
		65-60	Money and 'real life' problems	Recognise notation (r Find totals pay.	e all coins and notes. Understand £.p. e.g. £3.06), s.g. ke ohange and work out how to		AS3L15, SP3L6
		32-41	Mental calculation strategies (+ and -)	Put the lar Identify ne Bridge thr	rger number first to count on. rar doubles. ough a multiple of 10 and adjust.	AS3S11 AS3S21 AS3S17, AS3S18, AS3S23	AS3L13 AS3L12 AS3L7
		58-01	Making decisions, checking results	Choose an calculation Explain an Check sur	ppropriate number operations and n methods to solve word problems, nd record methods informally, ms by adding in different order.		SP3L1
		13	Place value, ordering, estimating, rounding	Say the nu less, than	umber that is 1, 10 or 100 more, or any given 2- or 3-digt number.	NS352. N53511	NS3L4
4-0	13	80-89	Measures, notuding problems.	Read time Read and to length. Use a rule nearest hi Read scale and m. Suggest s estimate of Record to umis (e.g. Choose ar calculator Explain an Classify a referring ti sides/edg Read and position.	In to 5 minutes. The point write mercalculary related or an drawn cancellulary related of minutes and measured division. I and compare using mad or minutes in the narrow of the second second minutes in the second second second second second minutes in the second second second second second minutes in the second second second second second second minutes in the second second second second second second minutes in the second second second second second second second minutes in the second second second second second second second minutes in the second s	55359 55351, 55353 55353 553515	55317 55317 55312 55313
				Use space Identify rig environme	es on square grids. ant angles in 2-D shapes and in the ent.	\$\$3\$5	
	-	62-65	Reasoning about shapes	Investigate	e general statements about shapes.		

Sample medium term plans for Year 3

Mult-e-Maths © Cambridge University Press 2005

Introduction to Mult-e-Maths teacher's notes

Teacher's notes

Each strand except Solving Problems consists of separate starters and lessons to enable you to mix and match starter and lesson activities appropriate to your planning. (The starters for Solving Problems are incorporated within the lessons, because each starter is designed to revise specific maths skills needed in the problem-solving lesson activity.) All of the activities are accompanied by teacher's notes.

The teacher's notes for starters include the following sections:

- Objective(s) from the NNS Framework •
- Prior knowledge and skills to help you to plan when it is • appropriate to incorporate this activity into your teaching
- Vocabularv •
- Resources
- Main teaching activity to give a suggested order of teaching, plus notes on using the Mult-e-Maths activity
- **Probing questions**

In addition to these sections, teacher's notes for lessons may also include some or all of the following:

- **Differentiated pupil activities** •
- Plenary •
- Key idea and assessment to suggest a focus for what to assess during the plenary
- Solutions to pupil activities

For ease of reference, each activity and its accompanying teacher's notes are coded, for example:

- FD6S17 means Year 6 Starter 17 of the Fractions, Decimals, Percentages, Ratio and Proportion Strand.
- AS3L7 means Year 3 Lesson 7 of the Addition and Subtraction Strand.

The codes for the six Mult-e-Maths Strands are:

- FD Fractions, Decimals, Percentages, Ratio and Proportion
- NS Numbers and the Number System
- AS Addition and Subtraction
- Multiplication and Division MD
- Measures, Shape, Space and Handling Data SS
- SP Solving Problems

Changing the order AS3L10 · section reaches as here at parker is he too Finding the rotating master tradition part strangers for speer of the manifest 10. Ly Next the second state of the constraints, e.g. $T + 0.5 \pm 10^{-1}$ The state constraint state the effective states reasons constraints and therein states and the effective states are constraints and the state of the states constraints and the first state for T is denoted by Letter $T + 0.5 \pm 0.0000$ into the model of the training states and the states of the states model of the states and the states of t Objective: The weighting findual functions doe in any or to second calculation same efficiency. the and device balances as W interface on caned \$ ap or or \$ that have been Prior have windigs and shills nading up in these multi rank Vacubalary To exped the soluty to defer reacyte, its here here many tool to execute you along that for all block days after the "wider, and and integrities, cars, total dispersion with being contract, longing Repearenty Provide Little contract present children Pessible starter 1210 Pallette -46 Main teaching activity fermannter für Laure 20, war fin 100 ratest. er tos alfibiosett to + ____ + 1+ + 35 in + ____ + 1+ + 35 in The Wall, 35, all door an hatta in portaining interiorge Lots ar othe union in the station and the material costs. Sing for ? 4+ 4+ - + m the stranging the prime of the second s A fragminister manifest out type data and and data for this manifestor the 2 database and as for execution of the instance. When the optimal manifestor the data is the previous for manifestor the second states of the second to be Annu sound toke the addition and data descentight provided for an fee special model another also a differentian feed rite or foot applicature • patholog it and to type 10+0+ 10+ and ett braff

wood frequency is and factor, e.g. 20 - 11. Recall on to as ign the moder decounter in the investiga-it has be implemented distribution of the left. We derive another in the interaction of the to on the induced panel but will be the loss and compress the subtractory ordered e.g. - the 12

Children.complet the Resource sheet.They should disc with their partner any changes origider that they that hel with their patter any changes of order half they tim helps), buppert Children work in modifysions and uncomber and a three longater to carry out the actility from with band page. I. Children bick must barange abnorn number of counter in 3 piles, with one tile hildren unter the spect. They kill help acpute he bid number of country, and alth hem to work cultrow many are Helen. Broorage children to make use fulgate order, and alth abnor calability to stable counter, stander to half, counting them al. The using content, name hands conting term at Extend days: Children was in pairs. They se indisting number addition putties (dimitar to hose used in he main kacting actually for each other. Nowever, hey use a miniter of 2 and 3-dig trumhers. They divides a with heir patter any changes of order that hey find heir patter any changes of order that hey find heir patter.

Plenary

Use attleboard page 3 to model some of the problems from the Pescarce sine I. Q. Now did you rearrange the number s? Why?

Who core que Loss, childrennoy we have the Vily? Who core que Loss, childrennoy we have used different Labejes tan each offer. Male sue haldwiden have opportarite to explain he way halthey babled aproxim as oberrate. If hey he as a different way, hey may hirsh hal hell way it somehow twow?, Blocus the effidency of different way.

Key idea and assessment

Changing the order can help when adding

simplify an add lian by rearranging the order of he numbers ?

Solutions

A1 7 2 9 8 4 4 11 6 5 6 5 7 3 8 16 9 14 10 26 B125 2 29 8 24 4 31 6 30 6 57

Personal notes

is labilish lihal 6 anti + are a \setKi'pair. Drag 17 outofik ox anti drag +linia he emply box. Then drag 17 inia he emaining box lo change the addition b: 6+ ++ 17-00 whatis 6 + 17 + 47 (27) Which order did you find the numbers eadesttb add

Interpretational
 Interpretational
 Interpretational
 Interpretation
 In

Check that children unders and the relationship between the first and second add ton's latement . Q Now can we work out the micding number?

where we may be corrected and colling number?
 Biocast sugges bene, Rightlyhn here hold of counting up from 30 is 30, if this is not sugges bet by citidem.
 Click on the titue bosis in the second old is to table entitie received the instituty monter, you could then us tables not be complete the first catilitons tablesentil.

Click on the 'Clear' buildon on the kolibar breset the s Greate similar problems by dragging numbers from th

whiteboard)

6• 17•••

Create similar problems by dragging numbers, non-two-square into the first addition statement. Vary the position the missing number in the question part of the statement.

-

brag the numbers 6, 17 and 4, from the 100 square into the

Ask citilizen to ty to calculate the blatby adding the numbers in the coder shown. Q Are there two numbers that you would find helpful to add together first?

30+ - 39

Indexe Ibalchanging he order of he numbers in he diton doesn't change he tobi, Click he blue answer bo confirm he tobi. speal with other Nos of numbers that con ale 10 or 20, pairs that make 9 or 11, pa subles ... Of sours how changing the orde drs can be very helpful when adding num

Sample teacher's notes for AS3L10

Year 3 Contents

Planning grid

Starters

SS3S1	Odd shape out
	Finding similarities and differences in 2-D shapes
SS3S2	Combining shapes
	Combining shapes to make other shapes
SS3S3	3-D shape properties
	Describing the properties of 3-D shapes
SS3S4	Directions and coordinates
	Describing squares on a grid using compass directions and coordinates
SS3S5	Right angles
	Identifying right angles in 2-D shapes and pictures of everyday objects
SS3S6	Telling the time
	Reading the time on an analogue or digital clock, and making the matching time on the other type of clock
SS3S7	One minute countdown
	Estimating and finding how many simple additions children can make and solve in one minute
SS3S8	How heavy?
	Estimating masses, reading scales and calculating combined masses
SS3S9	What's the length?
000040	
553510	How much water? Reading from scales on measuring evliptors
002044	
553511	Sorting numbers
662642	Sorting 2 Dichange
333312	Sorting 2-D shapes according to their properties
553513	What's the temperature?
000010	Reading a thermometer scale
SS3S14	Interpreting bar charts
000017	Interpreting a bar chart in which each interval represents two
SS3S15	Using coordinates
	Using simple coordinates to identify the positions of squares on a grid

Lessons

SS3L1	Properties of 2-D shapes
	Sorting and classifying 2-D shapes according to their properties
SS3L2	Properties of 3-D shapes
	Describing and sorting 3-D shapes according to their properties
SS3L3	Giving positions
	Giving instructions and finding positions on a grid of squares
SS3L4	Patterns
	Describing and making patterns
SS3L5	Right-angled turns
	Making right-angled turns on a 4-point compass and on a clock
SS3L6	Telling the time
	Reading the time on an analogue clock and writing 12-hour digital clock times

Measures, Shape, Space and Handling Data Year 3 Contents

SS3L7	Measuring lengths
	Measuring lengths to the nearest half centimetre
SS3L8	Measuring mass
	Measuring masses in kilograms, and in kilograms and grams, and using the masses to solve problems
SS3L9	Finding capacities
	Measuring capacities in litres and in millilitres, and solving problems involving capacities
SS3L10	Organising information
	Solving problems by organising and interpreting data in tally charts, pictograms and bar charts
SS3L11	Dates and times
	Discussing units of time and using a calendar
SS3L12	Right angles
	Identifying right angles, and saying whether a given angle is greater than or less than a right angle

Year 4 Contents

Planning grid

Starters

SS4S1	Odd shape out
55152	2-D shapes
00402	Sketching 2-D shapes based on descriptions
SS4S3	Properties of 3-D shapes Describing the properties of 3-D shapes
SS4S4	Directions and coordinates
	Describing points on a grid using compass directions and coordinates
SS4S5	Angles
	Comparing and ordering angles
SS4S6	Telling the time
	Reading the time on an analogue clock and saying how the same time would be shown on a digital clock, and vice versa
SS4S7	Estimating time
	Estimating how long a short task will take and finding the difference between the estimate and the actual time
SS4S8	Balancing items Finding items with the same mass
92129	What's the length?
00400	Measuring lengths and finding objects that would make a total length of 1 metre
SS4S10	Capacities
	Comparing the capacities of cylindrical containers visually and then by measuring
SS4S11	Sorting numbers
	Organising and interpreting data about numbers
SS4S12	Sorting shapes
	Sorting 2-D shapes into Carroll diagrams according to their properties
SS4S13	How hot is it?
	Estimating temperatures and using the scale on a thermometer
SS4S14	Representing and interpreting data
	Completing and interpreting tally charts and bar charts
SS4S15	Using coordinates
	Using coordinates to identify the positions of points on a grid of squares

Lessons

SS4L1	Investigating polygons
	Sorting polygons according to their properties
SS4L2	Properties of 3-D shapes
	Identifying the properties of 3-D shapes and using them to sort 3-D shapes
SS4L3	Compass points and coordinates
	Describing routes using compass directions, and points using coordinates
SS4L4	Symmetry and reflections
	Sorting polygons according to their lines of symmetry, and identifying reflections of polygons in a mirror line parallel to one side
SS4L5	Angles
	Relating turns to their measurements in degrees and comparing angles less than 180

Measures, Shape, Space and Handling Data Year 4 Contents

SS4L6	Time
	Reading the time to the nearest minute from analogue and digital clocks, and solving problems involving time
SS4L7	Perimeter
	Measuring and calculating the perimeters of simple shapes
SS4L8	How heavy?
	Using the relationship between kilograms and grams
SS4L9	Capacity
	Using measuring cylinders to find capacities and applying the relationship between litres and millilitres
SS4L10	Transport survey
	Collecting, organising and interpreting data about how children travel to school
SS4L11	Using a calendar
	Investigating the features of calendars and using a calendar to compare dates
SS4L12	Measuring area
	Counting squares to find the areas of simple shapes

Year 5 Contents

Planning grid

Starters

SS5S1	Odd triangle out
	Describing and naming triangles and identifying similarities and differences between them
SS5S2	Nets
	Identifying which arrangements of joined squares are nets of an open cube
SS5S3	Symmetrical patterns
	Completing symmetrical patterns on a grid of squares
SS5S4	Coordinates
	Giving and plotting coordinates on a grid of squares
SS5S5	Angles
	Estimating and measuring acute and obtuse angles
SS5S6	Telling the time
	Writing the time from an analogue clock using 12-hour and 24-hour digital notation
SS5S7	Changing units
	Converting larger metric units to smaller ones
SS5S8	Balancing masses
	Identifying items with the same mass
SS5S9	Finding the perimeter
	Calculating perimeters of rectangles and regular polygons
SS5S10	How much water?
	Comparing the capacities of containers, and identifying ways of making 1 litre of water
SS5S11	Investigating dice throws
	Investigating which number on a dice is most likely to be thrown
SS5S12	How likely?
	Discussing the likelihood of events
SS5S13	Temperatures
	Reading temperatures from a thermometer and presenting and interpreting the data collected
SS5S14	Finding modes and ranges
	Finding the mode and the range of sets of data
SS5S15	Area pairs
	Finding areas that match the dimensions of rectangles

Lessons

SS5L1	2-D shape properties
	Identifying the properties of 2-D shapes in order to classify them
SS5L2	3-D shapes
	Visualising 3-D shapes from 2-D drawings
SS5L3	Coordinates
	Using compass directions and then coordinates to plot the outlines of polygons
SS5L4	
SS5L4	Symmetry and reflection
SS5L4	Investigating lines of symmetry and reflections of 2-D shapes
SS5L4 SS5L5	Investigating lines of symmetry and reflections of 2-D shapes Angles
SS5L4 SS5L5	Investigating lines of symmetry and reflections of 2-D shapes Angles Estimating, measuring and drawing angles
SS5L4 SS5L5 SS5L6	Investigating lines of symmetry and reflections of 2-D shapes Angles Estimating, measuring and drawing angles The 24-hour clock
SS5L4 SS5L5 SS5L6	Investigating lines of symmetry and reflections of 2-D shapes Angles Estimating, measuring and drawing angles The 24-hour clock Interpreting and applying 24-hour clock times

Measures, Shape, Space and Handling Data Year 5 Contents

SS5L7	Area
	Carrying out area investigations to develop understanding that the area of a rectangle can be calculated by multiplying its length by its breadth
SS5L8	Mass
	Estimating and measuring masses, and expressing masses in different ways
SS5L9	Chance
	Discussing the likelihood of events occurring
SS5L10	Computer survey
	Testing a hypothesis by collecting, representing and interpreting data
SS5L11	Organising time
	Planning a school year with six terms
SS5L12	Translating shapes
	Investigating the effect of translating shapes on the coordinates of their vertices

Year 6 Contents

Planning grid

Starters	
SS6S1	Comparing 2-D shapes
	Describing and comparing the properties of quadrilaterals
SS6S2	Coordinates
	Giving the coordinates of points to complete polygons
SS6S3	Translating shapes
	Giving the coordinates of a shape after translations and describing translations given the starting and finishing coordinates
SS6S4	Angles
	Identifying and estimating acute and obtuse angles, and investigating the effect of changing the size of an angle in a right-angled triangle
SS6S5	Calculating angles
	Calculating missing angles in triangles
SS6S6	Rotating shapes
	Giving the coordinates of a shape after a rotation about a vertex
SS6S7	Sorting 3-D shapes
	Sorting 3-D shapes in a Venn diagram according to three criteria
SS6S8	Compound shapes
00000	
22029	Identifying the scale on a measuring cylinder and solving problems based on it
SS6S10	Which units?
	Suggesting suitable imperial and metric units to measure everyday objects
SS6S11	Imperial and metric masses
SS6S12	Time zones
000040	During a time zone map to identify the time in different parts of the world
556513	Pounds and euros
666644	
330314	Finding the mode, range, median and mean values of sets of data
996915	
000010	Investigating whether you are more likely to throw an odd or an even total score using two dice
Lessons	
SS6L1	Quadrilaterals
	Identifying the properties of quadrilaterals in order to name and classify them
SS6L2	3-D shapes
	Visualising 3-D shapes from 2-D drawings
SS6L3	Drawing polygons

Using coordinates, or angles and side lengths, to draw polygons SS6L4 Tangrams Investigating how shapes fit together to make other shapes SS6L5 Rotation Exploring rotations of shapes about one vertex

Measures, Shape, Space and Handling Data Year 6 Contents

SS6L6	Time and time zones
	Introducing times around the world
SS6L7	Compound shapes
	Calculating and comparing the areas and perimeters of compound shapes
SS6L8	Recording mass
	Solving problems involving mass and recording masses in different ways
SS6L9	Comparing capacities?
	Exploring the relationships between different standard measures for capacity
SS6L10	Interpreting data
	Thinking about how to organise and interpret data
SS6L11	Solving time problems
	Creating a timeline and a timetable using 24-hour clock times
SS6L12	Probability
	Exploring probability

Mult-e-Maths and the National Numeracy Strategy Framework

Measures, Shape, Space and Handling Data Year 3 Planning grid

Year 3 Framework objectives	Mult-e-Maths Starters and Lessons
(p73) Measure and compare using standard units	SS3S9 What's the length? Estimating, measuring and comparing lengths
	SS3L7 Measuring lengths Measuring lengths to the nearest half centimetre
	SS3L8 Measuring mass Measuring masses in kilograms, and in kilograms and grams, and using the masses to solve problems
	SS3L9 Finding capacities Measuring capacities in litres and in millilitres, and solving problems involving capacities
(p77) Read scales to the nearest division	SS3S8 How heavy? Estimating masses, reading scales and calculating combined masses
	SS3S10 How much water? Reading from scales on measuring cylinders
	SS3S13 What's the temperature? Reading a thermometer scale
(p79) Use units of time and know the relationships between them	SS3S7 One minute countdown Estimating and finding how many simple additions children can make and solve in one minute
	SS3L11 Dates and times Discussing units of time and using a calendar
(p79) Read the time to 5 minutes on an analogue clock and a 12-hour digital clock, and	SS3S6 Telling the time Reading the time on an analogue or digital clock, and making the matching time on the other type of clock
use the notation 9:40	SS3L6 Telling the time Reading the time on an analogue clock and writing 12-hour digital clock times
(p81) Classify and describe 3-D and 2-D shapes referring to their	SS3S1 Odd shape out Finding similarities and differences in 2-D shapes
properties	SS3S3 3-D shape properties Describing the properties of 3-D shapes
	SS3L2 Properties of 3-D shapes Describing and sorting 3-D shapes according to their properties
(p83) Make and describe shapes and patterns	SS3S2 Combining shapes Combining shapes to make other shapes
	SS3L4 Patterns Describing and making patterns
(p85) Identify and sketch lines of symmetry in simple shapes, and recognise shapes with no lines of symmetry	SS3L1 Properties of 2-D shapes Sorting and classifying 2-D shapes according to their properties
(p87) Read and begin to write the vocabulary related to	SS3S4 Directions and coordinates Describing squares on a grid using compass directions and coordinates
position, direction and movement	SS3S15 Using coordinates Using simple coordinates to identify the positions of squares on a grid
	SS3L3 Giving positions Giving instructions and finding positions on a grid of squares

Mult-e-Maths and the National Numeracy Strategy Framework – Measures, Shape, Space and Handling Data Year 3 Planning grid

Year 3 Framework objectives (continued)	Mult-e-Maths Starters and Lessons (continued)
(p89) Make and describe right- angled turns, including turns between the four compass points	SS3L5 Right-angled turns Making right-angled turns on a 4-point compass and on a clock
(p89) Identify right angles in 2-D shapes and the environment	SS3S5 Right angles Identifying right angles in 2-D shapes and pictures of everyday objects
(p89) Compare angles with a right angle	SS3L12 Right angles Identifying right angles, and saying whether a given angle is greater than or less than a right angle
(pp91, 93) Solve a given problem by organising and	SS3S11 Sorting numbers Identifying how given numbers in a Venn diagram have been sorted
interpreting numerical data in simple lists, tables and graphs	SS3S12 Sorting 2-D shapes Sorting 2-D shapes according to their properties
	SS3S14 Interpreting bar charts Interpreting a bar chart in which each interval represents two
	SS3L10 Organising information Solving problems by organising and interpreting data in tally charts, pictograms and bar charts

Key to lesson and starter references

SS3S1 refers to Measures, Shape, Space and Handling Data Year 3 Starter 1

SS3L1 refers to Measures, Shape, Space and Handling Data Year 3 Lesson 1