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Support High Quality Teaching and Learning

This package provides a scaffolded and spiralling learning framework with problem solving at its heart.

What's in Our Package



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Teacher's Guide with digital resources

Dig in C

Stages 1 – 6

Digital Resources in CD-Rom:

- Schemes of Work (editable)
- Lesson Plans (editable)
- Revision Worksheets (editable)
- Blackline Masters
- Chapter Openers
- Activity Book with Suggested Answers

(Resources also available at www.mc-maths.com)



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Why choose

MATHS

Marshall Cavendish

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Carefully Developed to guide pupils towards discovery and develop fluency and mastery in Mathematics

Well-designed to engage and captivate pupils

Enhance Teachers' Effectiveness to deliver better lessons

Master Concepts

Each lesson is scaffolded to ensure that pupils have the necessary support to understand new topics. Within each chapter are ample opportunities for formative assessment that enables teachers to monitor each pupil's progress.

> **Deepen conceptual understanding** with the **Concrete-Pictorial-Abstract approach** in which physical objects (concrete), followed by diagrams (pictorial) and finally numeral representations (abstract) are used to develop each concept.

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Adding or Subtracting

Let's Recall

Take some . Compare with your classmate. What is the difference between the number of cubes that you and your classmate have?

Let's Learn Together

A florist sold 16 tulips and 5 roses. How many flowers did she sell altogether?

We can draw a bar model to help us.

Let's check!

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How can you

check your answer?

 $\frac{-5}{16}$ My answer is correct.

16 + 5 = 21 She sold 21 flowers altogethe

16

She sold 21 flowers altogether.

- David has 31 green and orange marbles. There are 7 green marbles.
- There are 7 green marbles. How many orange marbles are there?
 - <u>31</u> 7 ?

31 - 7 = 24

74

Chapter 6

There are 24 orange marbles.

Pupil's Book, Stage 2

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Concrete

Pictorial

Abstract

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Stimulate Thinking

Each chapter is designed to nurture and encourage active, persistent and careful reflection. This reflection aids pupils in the development of critical and metacognitive thinking skills.

> There are 10 children in the playground.

Percentage

4 of them are girls. What percentage of the children are girls?

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Let's Explore

Share with your classmates where you have seen the symbol % in your daily life.

- In this chapter, you will learn to
 express a part of a whole as a percentage
 express fractions and decimals as percentages
 compare and order percentages, fractions and decimals

Pupil's Book, Stage 5

What is

percentage?

Let's Explore contains open-ended questions for problem solving and encourages creative thinking and application of metacognitive strategies.

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Save Lesson Preparation Time and Reduce Teachers' Workload

The teacher's guides are carefully laid out to give both experienced and novice teachers a wealth of resources, tips and helpful suggestions.

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Cater to Different Learning Needs

Designed for pupils of all levels, the series guides teachers on how to meet the needs of advanced learners and learners needing more support.

For advanced learners offers suggestions to challenge the more able pupils and **reinforces their understanding of the concepts**.

For learners needing more support offers suggestions to aid less confident pupils.

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Teaching ideas

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Prompt pupils to see that 99 is near 100.
 Point out that 99 = 100 – 1. Hence adding 99 is the same as adding 100 and then subtracting 1.

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- Conclude that 54 + 99 = 153.
- Prompt pupils to suggest other pairs of numbers where they can make use of this strategy to add numbers easily.
- Lead pupils to see that they can use this strategy when one of the numbers is near 100.

For advanced learners

Have pupils suggest a mental strategy to add 99 and 98 and list their steps to get the answer. (E.g. add 100 and 98, then subtract 1 from the sum; add 99 and 100, then subtract 2 from the sum, etc.)

For learners needing more support

For pupils who have difficulty adding numbers mentally where renaming is involved in the steps, guide them to count on in ones or tens to get the answer.

Let's Discover

- Have pupils work in pairs. Get each pair to discuss the mental strategies they used to add each pair of numbers. Then have some pupils present their answers to the class.
- Have pupils discuss and explain which strategy they prefer.
- Conclude that there can be more than one way to add the numbers.

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- Have pupils read the word problem. Guide them to see that they have to add 95 and 196 to find the total number of muffins.
- Prompt pupils to see that 196 is near 200, which is a multiple of 100. Point out that 196 = 200 - 4. Hence adding 196 is the same as adding 200 and then subtracting 4.
- Conclude that 95 + 196 = 291. Hence the baker baked 291 muffins altogether.
- Have pupils suggest other ways to add the numbers mentally. For example, 95 is near 100 (95 = 100 - 5). Hence adding 95 is the same as adding 100 and then subtracting r

Add 54 and 99 You can use this strategy add 99 to any number In what other cases can you use this strategy to add mentalling 99 is near 100. 99 = 100 - 1 First, add 100 to 54 54 + 100 = 154 Then subtract 1 from 154 154 - 1 = 15354 + 99 = 153 Let's Discover Complete the table How did you ach pair me 52 98 68 A baker baked 95 strawberry muffins. He also baked 196 chocolate muffins. How many muffins did he bake altogether? 196 is near 200. 196 = 200 - 4 First, add 200 to 95. 95 + 200 = 295 Then subtract 4 from 295 295 - 4 = 29195 + 196 = 291 He baked 291 muffins altogether 108 Chapter 8

124 Chapter 8

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Additional activity offers teachers more teaching ideas for pupils' enrichment.

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Additional activity

Material(s): 1 die per pair

- (1) Have pupils work in pairs. Provide each pair with a die
- (2) Get pupils to generate two 3-digit numbers by tossing the die.
- (3) Then ask them to choose an appropriate mental strategy to find the sum of the two numbers.
- (4) Get pupils to share their answers with their classmates.

Teaching ideas

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- Have pupils read the word problem. Prompt them to see that they have to add 427 and 202 to find the total number of flowers sold.
- Prompt pupils to see that 202 is near 200. Point out that 202 = 200 + 2. Hence adding 202 is the same as adding 200 and then adding 2.
- Conclude that 427 + 202 = 629.
- Prompt pupils to suggest ways to check the answer.
- Carry out Additional activity if time permits.

Let's Practise



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There are 3 bags of potatoes. Each bag has 5 potatoes. How many notat-

Schemes of Work*

Sections in the Chapter	Learning Outcome(s) in the Chapter	Sections in the Chapter	Learning Outcome(s) in the Chapter
hapter 1 Numbers 0 to 10		Chapter 10 Numbers 11 to 20	
 Counting Within 10 Ordering Numbers Within 10 Comparing Numbers Within 10 	 Count within 10 Read and write numbers within 10 Order numbers within 10 Compare numbers within 10 	A. Counting Within 20B. Ordering Numbers Within 20C. Comparing Numbers Within 20	Count within 20 Count in twos Read and write numbers within 20 Order numbers within 20 Compare numbers within 20
Chapter 2 Naming Positions			
A. Understanding PositionsB. Days of the Week	Recognise positions Tell days of the week	A. Adding Numbers Within 20	Add numbers within 20
Chapter 3 Length and Mass		B. Subtracting Numbers Within 20C. Solving 1-Step Word Problems	Subtract numbers within 20Solve 1-step word problems
A. Comparing LengthsB. Comparing Masses	Compare lengths Compare masses	Chapter 12 More on Length and	i Mass
Chapter 4 Number Pairs		A. Measuring and Comparing LengthsB. Measuring and Comparing Masses	Measure and compare lengthsMeasure and compare masses
 Making Number Pairs to 2, 3, 4, 5 and 6 	Make number pairs up to 9	Chapter 13 Time	
B. Making Number Pairs to 7, 8 and 9		A. Telling Time to the Hour	Tell time to the hour Know key times of day
Chapter 5 Addition Within 10		Chapter 14 Graphs	Know key times of day
 A. Ways to Add B. Writing Addition Sentences C. Solving 1-Step Addition Word Problems D. Adding These Numbers 	 Add two numbers within 10 Write addition sentences Solve 1-step addition word problems Add three numbers within 10 	A. Reading Lists and Tables B. Reading Pictograms C. Reading Block Graphs	Read lists and tables Read pictograms Read block graphs
Chapter 6 Subtraction Within 1	0	Chapter 15 Doubles and Halves	
 A. Ways to Subtract B. Writing Subtraction Sentences C. Solving 1-Step Subtraction Word Problems D. Relating Subtraction to Addition 	Subtract numbers within 10 Write subtraction sentences Solve 1-step subtraction word problems Relate subtraction to addition	 A. Finding Doubles B. Finding Near Doubles C. Finding Halves of Shapes D. Finding Halves of Numbers 	 Find doubles of numbers Find near doubles of numbers Find halves of shapes Find halves of numbers
Chapter 7 2D Shapes			
 A. Straight Lines and Curved Lines B. Squares, Rectangles, Triangles and 	Identify straight lines and curved lines	A. Sharing Equality B. Even and Odd Numbers Chapter 17. Numbers to 100	Find even and odd numbers
Circles C. Making Patterns With 2D Shapes D. Symmetry Chapter 8 3D Shapes	 Name shapes such as squares, rectangles, triangles and circles Sort 2D shapes Make patterns with 2D shapes Recognise symmetrical objects 	A. Counting Within 40 B. Counting Within 100	 Count within 100 Read and write numbers within 100 Count in tens Describe and continue patterns Estimate a number of objects
A. Flat Faces and Curved Faces	Recognise flat faces and curved faces	Chapter 18 Money	
 B. Cubes, Cuboids, Spheres and Cylinders C. Making Patterns With 3D Shapes 	 Name shapes such as cubes, cuboids, spheres and cylinders Sort 3D shapes Make patterns with 3D shapes 	A. Coins B. Paying With Coins	 Recognise and exchange coins of different values Pay an exact sum using coins
Chapter 9 Making 10		Chapter 19 Capacity	
A. Making Number Pairs to 10 B. Subtracting From 10	Make number pairs to 10 Subtract from 10	A. Comparing CapacitiesB. Measuring Capacities	Compare capacities Measure capacities
		Chapter 20 Handling Informati	ion
		A. Counting Within 40B. Counting Within 100	Use given information to make grap Use Carroll diagrams and Venn diagrams to grap objects

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*Please visit http://www.cambridgeinternational.org/ to see how the learning outcomes correlate to the Cambridge Primary Mathematics Curriculum framework.

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Stage 1

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Sections in the Chapter	Learning Outcome(s) in the Chapter
Chapter 1 Numbers to 100	
 A. Numbers Between a Pair of Tens B. More Than, Less Than C. Number Line D. Ordinal Numbers 	 List numbers between a pair of tens Find 1 more than / 1 less than a 2-digit number Find 10 more than / 10 less than a
	 2-digit number Describe and continue number patterns Place numbers on a number line Use ordinal numbers up to the 10th
Chamber O. Mars About Number	number and more
Chapter 2 More About Number	s to 100
 A. Place Values B. Comparing Numbers Within 100 C. Rounding Numbers 	 Count in tens and ones Recognise the place values of each digit in numbers Compare numbers within 100 Round numbers to the nearest ten
Chapter 3 2D Shapes	
A. Knowing More ShapesB. Symmetrical Shapes and Lines of Symmetry	Identify and describe 2D shapesIdentify symmetrical shapesIdentify and draw lines of symmetry
Chapter 4 3D Shapes	
A. Cones and PyramidsB. Identifying Shapes of Objects in Daily Life	 Name 3D shapes such as cones and pyramids Recognise 3D shapes in the environment
Chapter 5 Addition Within 100	
 A. Adding Without Renaming B. Adding With Renaming C. Number Pairs to 20 D. Number Pairs to 100 E. Adding Small Numbers 	 Add without renaming Add with renaming Make number pairs to 20 Make number pairs to 100 Add three or more small numbers
Chapter 6 Subtraction Within 10	00
 A. Subtracting Without Renaming B. Subtracting With Renaming C. Using Number Pairs to 20 to Subtract D. Using Number Pairs to 100 to Subtract E. Solving Number Sentences F. Adding or Subtracting 	 Subtract without renaming Subtract with renaming Using number pairs to 20 to subtract Using number pairs to 100 to subtract Solve number sentences Use addition or subtraction to solve word problems
Chapter 7 Length	
 A. Measuring Length in Centimetres B. Measuring Length in Metres C. Comparing Lengths 	 Estimate and measure lengths in centimetres Estimate and measure lengths in metres Compare lengths
Chapter 8 Multiplication	
A. Adding Equal Groups B. Multiplication Sentences	Add equal groups Write multiplication sentences

Sections in the Chapter	Learning Outcome(s) in the Chapter
Chapter 9 Multiplying by 2, 5 ar	nd 10
 A. Multiplying by 2 B. Multiplying by 5 C. Multiplying by 10 D. Solving Multiplication Word Problems 	 Count in twos Build up the multiplication table of 2 Count in fives Build up the multiplication table of 5 Count in tens Build up the multiplication table of 10 Solve multiplication word problems
Chapter 10 Multiplying by 3 and	4
 A. Multiplying by 3 B. Multiplying by 4 C. Solving Multiplication Word Problems 	 Count in threes Build up the multiplication table of 3 Count in fours Build up the multiplication table of 4 Solve multiplication word problems
Chapter 11 Mass	
 A. Measuring Mass in Kilograms B. Measuring Mass in Grams C. Comparing Masses 	 Estimate and measure masses in kilograms Estimate and measure masses in grams Compare masses
Chapter 12 Capacity and Volum	e
 A. Measuring Capacity and Volume in Litres B. Comparing Capacities Chapter 13 Data Handling 	 Estimate and measure capacities and volumes in litres Compare capacities
A. Sorting Numbers or ObjectsB. Making and Understanding Graphs	 Use Carroll and Venn diagrams to sort numbers or objects Organise information to make and understand graphs
Chapter 14 Division	
A. Division as GroupingB. Any Left Over?	Divide using groupingDivide and leave some left over
Chapter 15 Dividing by 2 and 3	
A. Dividing by 2B. Even and Odd NumbersC. Dividing by 3	 Relate division to multiplication Divide by 2 and 3 Recognise even and odd numbers
Chapter 16 Dividing by 4, 5 and	10
 A. Dividing by 4 B. Dividing by 5 C. Dividing by 10 	Relate division to multiplicationDivide by 4, 5 and 10
Chapter 17 Time, Days and Mon	ths
 A. Telling Time to the Half Hour B. Telling Time Using Before and After C. Measuring Time in Minutes and Seconds D. Days and Months 	 Tell time to the half hour Tell time using before and after Measure time in minutes and seconds Name and order days and months

Stage 2

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Sections in the Chapter	Learning Outcome(s) in the Chapter
Chapter 18 Doubles and Halves	
A. Finding DoublesB. Finding Halves of Numbers	Find doubles of numbersFind halves of numbers
Chapter 19 Halves and Quarters	
 A. Finding Parts of a Whole B. Making a Whole C. Finding Halves and Quarters of a Number of Objects 	 Recognise and name one-half and quarters Recognise and find halves and quarters of shapes Recognise that or make a whole Recognise and find halves and quarters of a number of objects
Chapter 20 Angles and Moveme	
 A. Angles and Turnings B. Knowing Right Angles C. Movement 	 Identify angles as turnings Recognise whole, half and quarter turns, both clockwise and anti-clockwise Identify right angles Follow and give instructions involving position, direction and movement
Chapter 21 Money	
 A. Coins and Notes B. Exchanging Money C. Counting, Reading and Writing Money D. Making Up an Amount of Money E. Adding and Subtracting Money 	 Recognise dollar notes and coins Compare amounts of money Exchange coins or notes for their equivalent values Use money notation Make up an amount of money Solve word problems on addition an subtraction of money Work out change
Sections in the Chapter	Learning Outcome(s) in the Chapter

Sections in the Chapter	Learning Outcome(s) in the Chapter
Chapter 1 Numbers to 1000	
 A. Counting in Hundreds, Tens and Ones B. Place Values C. Numbers and Words Chapter 2 More About Number 	Count within 1000 Recognise the place value of each digit in numbers Read and write numbers within 100 rs
A. Counting On and Counting BackB. Number LineC. Comparing and OrderingD. Rounding Numbers	 Count on and count back Place 3-digit numbers on a number line Compare and order numbers within 1000 Round numbers to the nearest ten and hundred
 Chapter 3 2D Shapes and 3D 1 A. Sides, Vertices and Right Angles B. Making and Drawing Shapes C. Faces, Edges and Vertices D. Pyramids and Prisms 	Shapes • Classify 2D shapes according to the sides, vertices and right angles • Identify, describe and draw 2D shapes • Identify and describe 3D shapes according to their faces, edges and vertices • Identify which nets will make a cut • Identify, describe and make pyramids and prisms

Sections in the Chapter	Learning Outcome(s) in the Chapter
hapter 4 Addition and Subtrac	tion Within 1000
Adding Without Renaming	Add without renaming
Subtracting Without Renaming	Subtract without renaming
Adding With Renaming	Add with renaming
Subtracting With Renaming	Subtract with renaming
apter 5 Word Problems	
Solving Word Problems Involving Addition	Solve 2-step word problems involving addition
Solving Word Problems Involving	Solve 2-step word problems
Subtraction	Involving subtraction
Addition and Subtraction	involving addition and subtraction
apter 6 Length	
Metres and Centimetres	Recognise the relationship between
Measuring Length in Metres and	metres and centimetres
Centimetres	Choose appropriate units of measure
Adding and Subtracting Lines	Measure lengths in metres
Kilometres and Metres	and centimetres
	Convert lengths between metres and centimetres
	Draw and measure lines
	Do simple addition and subtraction
	of lengths
	Relate kilometres and metres
apter 7 Multiplication	
Multiplication Tables of 2, 3, 4, 5 and	Write and complete multiplication tables of 0.2.4.5 and 10
Nultiplication Tables of 6 and 9	Write and complete multiplication
Multiplying by 10	tables of 6 and 9
Multiplying Teen Numbers by 3 and 5	Multiply 2-digit numbers by 10
Solving Word Problems	Multiply teen numbers by 3 and 5
	 Solve word problems involving multiplication
apter 8 Division	
Polating Division to Multiplication	Delate division to multiplication
Division With Remainder	Work out division with remainder
Solving Word Problems	Solve word problems involving
	division
apter 9 Mass	
Kilograms and Grams	Measure masses in kilograms and grams
Solving Word Problems	Read scales for masses
	Relate kilograms and grams
	Solve word problems involving
	kilograms and grams
apter 10 Capacity	
Measuring in Litres and Millilitres	Measure capacities and volumes in litroe and millitere
Relating Litres and Millilitres	Polato litros and millilitros
Solving Word Problems	Keiute iitres und millilitres Solve word problems involving
	litres and millilitres

Stage 3

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Sections in the Chapter	Learning Outcome(s) in the Chapter
Chapter 11 Symmetry	
A. Lines of Symmetry	Identify lines of symmetry
B. Completing Symmetrical Shapes	Complete symmetrical shapes
C. Drawing Reflections of Shapes	Draw reflections of shapes
Chapter 12 Time and Dates	
A. Reading and Writing Time	Read and write time
B. Time Intervals	Calculate time intervals
C. Reading a Calendar	Read a calendar
Chapter 13 Number Crunching	
A. Numbers in Steps	Count on and count back in steps of
B. Doubling and Halving	2, 3, 4, 5 and 10
C. Complements to 100 and 1000	Understand the relationship between
	doubling and halving
	Find doubles and halves of numbers within 100
	Find complements to 100
Chamber 14. Darte Handline	
Chapter 14 Data Hanaling	
A. Tally Charts and Frequency Tables	Read and use tally charts and froquency tables
B. Pictograms With Scales	Pood and use piste grame with a sub-
C. Bar Charts	Read and use pictograms with scales
D. Sorting Data Using Two Criteria	Keaa and Use bar charts
	Sort aata using two criteria
Chapter 15 Fractions	
A. Unit Fractions	Recognise and name unit fractions
B. Parts of a Whole	
C. Simple Mixed Numbers	Recognise and name a fraction of a whole
D. Comparing and Ordering Simple	Recognise and name simple
. actions and mixed notifibers	mixed numbers
	Compare and order simple fractions
	Place simple fractions and mixed numbers on a number line
Chamber 17, Marrie Al. 17, 11	mixed numbers on d number line
Chapter 16 More About Fraction	S
A. Equivalent Fractions of Half	Find equivalent fractions of half
B. Fractions of a Number	Find a fraction of a number
Chapter 17 Money	
A. Using Money Notation	Use money notation
B. Converting Money	Convert between dollars and cents
C. Adding Money	Add money
D. Finding Change	Find change
E. Solving Word Problems	Solve word problems involving money
Chapter 18 Right Angles	
A. Comparing Anales With a Right Angle	Compare anales with a right angle
B. Drawing Right Angles With a Set	Draw right angles with a set square
Square	State light angles when a set square
Chapter 19 Position and Movem	ent
A. 4-Point Compass	Tell the directions north, east, south
B. Square Grid	and west
	Locate and describe a position in a

Sections in the Chapter	Learning Outcome(s) in the Chapter
Chapter 1 Numbers to 10 000	
 A. Counting in Thousands, Hundreds, Tens and Ones B. Place Values C. Numbers and Words 	Count within 10 000 Recognise the place value of each digit in numbers Board and write pumphers
C. Nombers and words	within 10 000
Chapter 2 More About Numbers	
 A. Counting On and Counting Back B. Number Line C. Comparing Numbers Within 10 000 D. Rounding Numbers 	 Count on and count back Describe and continue number sequences Place numbers on a number line Compare numbers within 10 000 Round numbers to the nearest ten and hundred
Chapter 3 Addition and Subtrac	tion
A. AdditionB. SubtractionC. Solving Word Problems	 Add without renaming Add with renaming Subtract without renaming Subtract with renaming Solve word problems involving addition and subtraction
Chapter 4 Time	
 A. Using a.m. and p.m. B. Telling Time in Hours and Minutes C. Calculating Time Intervals D. Reading Simple Timetables and Using Calendars 	 Use a.m. and p.m. Tell time in hours and minutes Choose units of time to measure time intervals Calculate time intervals Read simple timetables and use calendars
Chapter 5 Multiplication	
 A. Multiplication Tables B. Multiplying by a 1-Digit Number C. Multiplying by 10and 100 	 Write and complete multiplication tables of 2, 3, 4, 5, 6, 7, 8, 9 and 10 Multiply 2-digit numbers by a 1-digit number Recognise the effect of multiplying numbers by 10 and 100
Chapter 6 Division	
A. Dividing by a 1-Digit NumberB. Dividing by 10 and 100C. Even and Odd Numbers	 Divide 2-digit numbers by a 1-digit number Recognise the effect of dividing numbers by 10 and 100 Make general statements about even and odd numbers
Chapter 7 Pictograms and Bar C	harts With Scales
A. Reading and Making Pictograms With Scales	Read amd make pictograms with scales
B. Reading and Making Bar Charts With Scales	Read and make bar charts with scales
Chapter 8 Number Crunching	
 A. Complements to 100 and 1000 B. Mental Addition C. Mental Subtraction D. Doubling and Halving E. Multiplying Creatively 	 Find complements to 100 and 1000 Add mentally Subtract mentally Find doubles and halves of numbers Multiply creatively

Sections in the Chapter	Learning Outcome(s) in the Chapter
Chapter 9 Negative Numbers	
A. Understanding Negative NumbersB. Using Negative Numbers	Recognise negative numbers Describe and continue number sequences involving negative numbers
	Use negative numbers
Chapter 10 From 2D Shapes to	3D Shapes
A. Polygons Making and Drawing Polygons Symmetry J. 3D Shapes and Nets	 Identify and describe more 2D shap Make and draw polygons Identify and draw lines of symmetrin 2D shapes and patterns Draw 3D shapes Recognise and make nets
Chapter 11 Decimals	
 A. Tenths B. Hundredths C. Relating Money Notation to Decimals 	 Read and write tenths and hundredths in decimal notation Recognise the place value of each digit in decimals Place decimals on a number line Relate money notation to decimals Round amounts of money to the nearest dollar
Chapter 12 Length, Mass and C	Capacity
 A. More About Length B. More About Mass C. More About Capacity 	 Choose and use standard metric units Understand the meaning of 'kilo', 'centi' and 'milli' Use decimal notation to record readings Read divisions on partially numbers scales Convert between units of measure Estimate and measure lengths, masses and capacities using standard metric units
Chapter 13 Anales, Direction a	nd Position
 A. Angles and Turns B. Grids, Direction and Position 	 Measure angles and turns in degree Compare and order angles Identify positions on grids of squar Give directions to follow on a given path
Chapter 14 Fractions	
 A. Parts of a Whole B. Equivalent Fractions C. Comparing and Ordering Fractions D. Fractions and Decimals 	 Find fractions of shapes Identify fractions with a total of 1 Recognise and find equivalent fractions Compare and order fractions Recognise equivalence of fractions and decimals
Chapter 15 Mixed Numbers	
A. Mixed NumbersB. Ordering Mixed Numbers	 Recognise mixed numbers Order mixed numbers on a number line

Sections in the Chapter	Learning Outcome(s) in the Chapter
Chapter 16 More About Fracti	ions
A. Fraction of a Set	Find fraction of a set
B. Proportion	Recognise proportions
Chapter 17 Perimeter and Are	ea
A. Perimeter	Measure and calculate the
B. Area	perimeters of squares and rectangles
	 Recognise that area is measured in square units
	Find the area of figures by counting squares
Chapter 18 Data Handling	
A. Graphs With Different Scales	Use graphs of different scales
B. Carroll Diagrams	Use Carroll diagrams
C. Venn Diagrams	Use Venn diagrams

Sections in the Chapter	Learning Outcome(s) in the Chapter
Chapter 1 Numbers to 999 999	
 A. Place Values B. Counting On and Counting Back C. Comparing and Ordering Numbers D. Rounding Numbers 	 Recognise the place value of each digit in numbers Read and write numbers up to 999 999 Count on and count back. Recognise and extend number sequences Compare and order numbers up to 999 999 Round numbers to the nearest ten, hundred and thousand
Chapter 2 Addition and Subtrac	tion
 A. Addition B. Subtraction C. Adding More Numbers D. Estimation 	 Add numbers up to 4 digits Subtract numbers up to 4 digits Add three or more numbers Estimate answers in calculations
Chapter 3 Angles	
A. Types of AnglesB. Estimating and Measuring AnglesC. Angles on a Straight Line	 Identify different types of angles Estimate and measure the size of an angle in degrees Calculate angles on a straight line
Chapter 4 Lines and Shapes	
 A. Perpendicular Lines B. Parallel Lines C. 3D Shapes and Nets 	Identify perpendicular lines Identify parallel lines Visualise 3D shapes from nets

Sections in the <u>Chapter</u>	Learning Outcome(s)
	in the Chapter
Chapter 5 Multiplication and D	ivision
 A. Multiplying by a 1-Digit Number B. Multiplying by Tens and 100 C. Multiplying by a 2-Digit Number D. Dividing by a 1-Digit Number E. Dividing by Tens and 100 F. Calculating With Brackets G. Solving Word Problems 	 Multiply 3-digit numbers by a 1-digit number Recognise the effects of multiplying numbers by tens and 100 Multiply 2-digit numbers by a 2-digit number Divide 2-digit and 3-digit numbers by a 1-digit number Recognise the effects of dividing numbers by tens and 100 Calculate with brackets Solve word problems
Chamber (Fristers At this is a	d Courses Number
Chapter 6 Factors, Multiples an	id Square Number
 A. Factors B. Multiples C. Divisibility Rules D. Square Numbers 	 Find factors of 2-digit numbers Recognise multiples of 5, 10, 25, 50 and 100 Apply tests of divisibility by 2, 5, 10 and 100 Recognise square numbers
Chapter 7 Time	
 A. Relating Seconds and Minutes B. 24-Hour Clock C. Time Intervals in Hours and Minutes D. Time Intervals in Days, Weeks, Months and Years 	 Relate seconds and minutes Interpret the 24-hour clock Calculate time intervals using the 24-hour clock Calculate time intervals in days, weeks, months and years
Chapter 8 Number Crunching	
 A. Adding and Subtracting Near Multiples of 10, 100 and 1000 B. Doubling and Halving C. Multiplying Creatively 	 Add and subtract near multiples of 10, 100 and 1000 Double numbers up to 100 Double multiples of 10 and 100, and derive the corresponding halves Multiply creatively
Chapter 9 More About Number	rs
 A. Positive and Negative Numbers B. General Statements About Numbers 	 Count on and count back beyond zero Describe and extend number sequences Order and compare positive and negative numbers Find the rise and fall in temperatures Make general statements about numbers
Chapter 10 Data Handling	
 A. Bar Line Charts and Line Graphs B. Mode of a Set of Data C. Likelihood of Events 	 Read and interpret bar line charts and line graphs Construct simple line graphs Read and interpret the mode of a data set Describe how likely an event will occur
Chapter 11 Decimals	
A. Comparing and Ordering DecimalsB. Rounding Decimals	 Compare and order decimals up to 2 decimal places Round decimals up to 2 decimal places to the nearest whole number

Sections in the Chapter	Learning Outcome(s) in the Chapter	
Chapter 12 Adding, Subtracting and Multiplying Decimals		
 Chapter 12 Adding, Subtracting A. Addition B. Subtraction C. Multiplying by a 1-Digit Number D. Doubling and Halving E. Solving Word Problems Chapter 13 More on Measurem A. Converting Between Units of Measure B. Comparing and Ordering More gurants	 Add decimals with the same number of decimal places Subtract decimals with the same number of decimal places Subtract decimals with the same number of decimal places Multiply a decimal with 1 decimal place by a 1-digit whole number Find doubles and halves of decimals Solve word problems involving addition, subtraction and multiplication of decimals Convert between units of measure Compare and order measurements in mixed units 	
 Measurements C. Rounding Measurements D. Drawing and Measuring Lines E. Comparing Readings on Different Scales 	 Round measurements to the nearest whole unit Draw and measure lines Compare readings on different scales 	
Chapter 14 Mixed Numbers and	Improper Fractions	
 A. Ordering Mixed Numbers B. Improper Fractions C. Changing Improper Fractions and Mixed Numbers D. Fractions and Division 	 Order mixed numbers Identify improper fractions Change improper fractions and mixed numbers Relate fractions to division 	
Chapter 15 Percentage		
 A. Per Cent B. Decimals and Fractions as Percentages C. Percentage Part of a Whole 	 Express a part of a whole as a percentage Express fractions and decimals as percentages Compare and order percentages, fractions and decimals Calculate percentage part of a whole 	
Chapter 16 Ratio		
A. Simple RatioB. Equivalent Ratios	 Interpret ratios a : b and b : a Recognise and find equivalent ratios Express a ratio in its simplest form 	
Chapter 17 Symmetry and Trian	gles	
A. Reflective SymmetryB. Rotational SymmetryC. Types of Triangles	 Identify reflective symmetry Create symmetrical patterns with two lines of symmetry Identify rotational symmetry about a centre point for which shapes can move about Identify and classify triangles Describe properties of triangles 	
Chapter 18 Translation and Ref	lection	
A. CoordinatesB. TranslationC. Reflection	 Read and plot points using coordinates on a grid Translate a shape to a new position on a grid Make a reflected image of a shape in a mirror line 	

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Sections in the Chapter	Learning Outcome(s) in the Chapter	(
Chapter 19 Perimeter and Area		Γ
A. Perimeter B. Area	Measure and calculate the perimeter of polygons	T
	Calculate area of rectangles and	L
	squares using formula	I
Sections in the Chapter	Learning Outcome(s) in the Chapter	I
Chapter 1 Whole Numbers		I
A. Place Values	Recognise the place value of each	t
B. Comparing and Ordering Numbers	digit in numbers	L
C. Estimating and Rounding Numbers	Compare and order numbers	
	kound numbers to the hearest ten, hundred and thousand	ŀ
Chapter 2 Factors, Multiples an	d Prime Numbers	+
A Frater Multiples		
A. Factors, Multiples and Common Multiples	Find factors of 2-aigit numbers Find multiples and common multiples	4
B. Divisibility Rules	Apply tests of divisibility by 2 4 5 10	
C. Prime Numbers	25 and 100	
	Recognise and find prime numbers	1
Chapter 3 Shapes		t
A. Polygons	Recognise and classify polygons	ŀ
B. 3D Shapes	Identify and describe properties of auadrilaterals	
C. INELS	Visualise and describe the properties of 3D shapes	
	Recognise the relationship between	-
	2D and 3D shapes	L
	Recognise nets of 3D snapes	I
Chapter 4 Operations With Who	ole Numbers	1
A. Multiplying and Dividing by Tens, Hundreds and 1000	Multiply and divide by tens, hundreds and 1000	
 B. Multiplying by 1-Digit and 2-Digit Numbers 	Multiply and divide by 1-digit and 2-digit numbers	t
C. Dividing by 1-Digit and 2-Digit	Apply the order of operations	F
D Order of Operations	Apply mental calculation strategies	
E. Mental Calculations		+
Chantor E. Longth		I
	Use standard units of macruins for	-
B. Drawing Length	length	-
	Convert between units of measure for length	1
	Draw and measure lines	
Chapter 6 Time		1
A. Converting Time Between Hours.	Convert units of time	1
Minutes and Seconds	Tell time in 24-hour clock notation	
B. Telling and Comparing Time	Compare times	
C. Time Intervals	Calculate time intervals	

Sections in the Chapter	Learning Outcome(s) in the Chapter
hapter 7 More About Number	s
Positive and Negative Numbers General Statements About Numbers Number Sequences Decimals	 Perform subtraction involving negative numbers Order and compare negative numbers Use the >, < and = signs Make general statements about odd and even numbers Find rules for number sequences Write decimals with place values up to thousandths Recognise the place value of each digit in decimals with up to 3 decima places Compare and round decimals with up to 2¬ decimal places
banter 8 Operations With De	rimals
Addition and Subtraction Multiplying by 10, 100 and 1000 Dividing by 10 and 100 Converting Length Multiplying and Dividing by 1-digit Numbers Decimals in Context	 Add and subtract decimals Multiply decimals by 10, 100 and 1000 Divide decimals by 10 and 100 Convert between units of measure for length Multiply and divide decimals by 1-digit numbers Solve word problems involving decimals
Chapter 9 Mass and Volume	
Measuring and Converting Mass Measuring and Converting Volume Solving Word Problems	Use standard units of mass Convert between units of mass Use standard units of volume Convert between units of volume
Chapter 10 Data Handling	
Line Graphs Mode, Median, Mean and Range Probability	 Use line graphs Find the mode, median, mean and range Use the language of probability Apply statistics in everyday life
Chapter 11 Perimeter and Area	
Perimeter and Area of Squares and Rectangles Perimeter and Area of Compound Shapes Area of Irregular Shapes	 Measure and calculate the perimeter and area of squares and rectangles Find the unknown length or width of squares and rectangles Calculate the perimeter and area of compound shapes Estimate the area of irregular shapes
Chapter 12 Time Zones	
Time Zone Map Finding the Time in Different Time Zones	 Find the time difference between two time zones Find the local time in different time zones

apter 13 Fractions, Mixed Numbers and Decimals quivalent Fractions and the Simplest comparing and Ordering Fractions converting Mixed Numbers and mproper Fractions converting Fractions and Decimals Find equivalent fractions on despress fractions in their simplest form Compare and order fractions Compare and order fractions Convert mixed numbers and improper fractions Convert mixed numbers and improper fractions Convert mixed numbers and improper fractions Convert fractions and decimals Relate fractions with division Find percentages Pater 14 Percentage Express fractions as percentages Find percentages of shapes Find percentages of shapes Find unknown angles using angle properties Solve word problems involving percentages Draw angles Find unknown angles using angle properties Proverties Convert shapes Relact shapes Relact shapes Relact shapes Relact shapes Rotate shapes Rotate shapes Rotate shapes Rotate shapes Rotate shapes Relact shapes Rotate shapes Rotate shapes Rotate shapes Rotate shapes Rotate shapes Relact shapes Relact shapes Relact shapes Relact shapes Relact shapes Relact shapes<th>Sections in the Chapter</th><th>Learning Outcome(s) in the Chapter</th>	Sections in the Chapter	Learning Outcome(s) in the Chapter
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